OPERATOR'S MANUAL

READ THIS MANUAL THOROUGHLY

- **If you don't understand any portion, contact your dealer for a demonstration of actual starting and operating procedures.**

MODELS
4501
8601

LAWN-BOY®

UTILITY

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SAFETY

THE PURPOSE OF SAFETY SYMBOLS IS TO ATTRACT YOUR ATTENTION TO POSSIBLE DANGERS. THE SYMBOLS, AND THE EXPLANATIONS WITH THEM, DESERVE YOUR CAREFUL ATTENTION AND UNDERSTANDING. SAFETY WARNINGS DO NOT BY THEMSELVES ELIMINATE ANY DANGER; THE INSTRUCTIONS OR WARNINGS THEY GIVE ARE NOT SUBSTITUTES FOR PROPER ACCIDENT PREVENTION MEASURES.

Symbol	Meaning
⚠ SAFETY WARNING	Failure to obey a safety warning may result in injury to you or to others.
NOTE:	*Advises you of information or instructions vital to the operation or maintenance of your equipment.*

This mower is designed and intended for the purpose of mowing (cutting) grass and, when specially equipped with a grass bag, for bagging cut grass. Any use for purposes other than those noted above could prove dangerous to user or bystanders.

⚠ SAFETY WARNINGS

Prevent accidents. Use the following practices for operating your mower safely. These warnings apply to all rotary, gasoline engine powered mowers, regardless of manufacturer. They are recommended by LAWN-BOY and the Outdoor Power Equipment Institute, Inc., Washington, D.C.

CLEAR THE AREA

Clean the lawn of sticks, stones, wire, etc. They can be picked up and hurled great distances by the blade. Mow only in cleaned areas.

Keep children and pets away from vicinity of mower as you would any cutting machinery.

WEAR PROPER ATTIRE

Don't wear loose fitting clothing. Provide some external protection for yourself by means of long, heavy denim trousers and heavy shoes. Never mow when barefoot or wearing open sandals. Safety shoes are recommended.

CHECK THE MOWER BEFORE USE

Check all nuts, bolts and fasteners for tightness, especially the blade nut (torque blade nut to 30-32 ft. lbs.). Disconnect spark plug lead (Electric start models; disconnect battery connections) before check.

Keep all guards in place at all times.

Check grass or leaf bags for wear or deterioration. Replace bag if necessary.

Have a competent serviceman make a thorough inspection of your mower at least once a year.

HANDLE FUEL PROPERLY

Gasoline is extremely flammable and highly explosive under certain conditions. Always stop engine, and do not smoke or allow open flames or spark when mixing fuel or refueling.

To prevent possible explosion or ignition of vaporized fuel, do not store mower with fuel in tank or carburetor in enclosure with open flame. (Example: Furnace or water heater pilot light.)

Always store or transport mower with fuel shut-off valve in the "OFF" position.

Fill tank outdoors. Wipe up spilled gasoline. Replace cap securely. Use an approved safety container to handle and store gas. Keep engine free from accumulations of grass, leaves or excessive grease. These combustible materials could result in a fire.

Never start or run the engine inside where exhaust fumes can collect. Carbon monoxide present in the exhaust is an odorless and deadly gas.

KNOW YOUR CONTROLS

Learn how to stop the engine quickly. Be sure the control handle is in "NEUTRAL" position (to the rear) before starting or stopping self-propelled models.

START AND MOW WITH CARE

Never allow anyone to operate your mower without complete instructions. Teach all safety rules and operating instructions to all users. DO NOT ALLOW CHILDREN TO OPERATE MOWER.

Don't start the engine until you are ready to mow. Be sure mower will not tip or roll during starting operation. When starting engine, place one foot on top of blade housing as designated with heel off the ground to aid stability. Never stand in front of self-propelled mowers. Keep clear of discharge opening. Keep hands and feet away from moving parts. Never place hands or feet under the mower while blade is turning. Stop the engine and make sure the blade has come to a complete stop and the spark plug wire is disconnected, (Electric start models; disconnect battery connections) before attempting to clean or unclog the catcher assembly or discharge chute.

Always push, never pull, a mower with the engine running. Mow across face of slopes. Do not mow excessively steep slopes. Control direction of mower by hand pressure on the handle, not foot pressure on the mower housing. Do not lag behind or let mower pull you. Keep a firm hold on the handle and walk, never run with mower. Mow in daylight or good artificial light. Never operate equipment in wet grass. Always be sure of your footing. Stop engine before changing or emptying catcher bag, pushing mower across walks, drives, roads or before leaving operating position, even for a moment.

If operating mower on uneven or rough ground, be especially careful. Front of mower may drop lower than normal, and hidden objects may be thrown by blade. Keep all four wheels on the ground when mowing. If mower is tipped while blade is turning, blade is exposed and accidents can occur.

Avoid striking trees, walls, curbs or other solid objects with mower. Never deliberately mow over any object. Exercise special care when mowing around objects to prevent the blade striking them. If an object is struck, or mower starts to vibrate, stop engine immediately, remove spark plug wire (Electric start models; disconnect battery connections) and examine mower for damage. Replace damaged parts before restarting and operating mower.

MAKE ADJUSTMENTS CAREFULLY

Do not overspeed engine or alter governor settings. Excess speed is dangerous and shortens mower life. Stand to one side and keep feet and hands clear while making carburetor adjustments. Height adjustments should be made only after engine and blade are stopped. Disconnect spark plug lead (Electric start models; disconnect battery connections) prior to performing service on engine or mower. Keep lead away from plug. On self-propelled models be sure control is in "NEUTRAL" position.

Never rotate blade with hand or foot without first removing spark plug wire (Electric start models; disconnect battery connections) to prevent starting.

REMOVE KEYS WHEN STORING

Electric start mowers cannot be started, even manually, with key removed.

REPLACEMENT PARTS

When replacement parts are required, use genuine OMC parts or parts with equivalent characteristics including type, strength, and material. Failure to do so may result in product malfunction and possible injury to the operator and/or bystanders.

IT'S UP TO YOU. A POWER MOWER IS NO SAFER THAN ITS OPERATOR.

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PRODUCT REFERENCES, ILLUSTRATIONS AND SPECIFICATIONS

When reference is made in this manual to a brand name, number, product or specific tool, an equivalent product may be used in place of the referred to product unless specifically stated otherwise. All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of printing. The right is reserved to make changes at any time without notice.

⚠ SAFETY WARNING:

Do not fill gasoline tank while engine is hot or running. Spilling gasoline on hot engine may cause a fire or explosion.

ENGINE LUBRICATION - ALL MODELS

NOTE:

Your LAWN-BOY® mower uses a two cycle engine. This means the oil and gasoline must be mixed together. Failure to use the proper fuel mixture will result in serious damage to the engine.

GASOLINE — Use automotive regular grade with a minimum of 89 pump octane. "No-Lead" or "lead free" gasoline of 86 pump octane is satisfactory if owner wishes to use it.

LUBRICATION (OIL) — Use LAWN-BOY 2-CYCLE oil available from your LAWN-BOY deaaler. If not readily available, use an equivalent grade of two cycle oil from a reputable oil company. DO NOT USE AUTOMOTIVE OILS.

FUEL MIXTURE — Use clean metal container. Mix thoroughly. DO NOT mix fuel directly in mower fuel tank.

CORRECT FUEL MIXTURE — Use LAWN-BOY 2-CYCLE oil. Mix one full can with 2 gallons (U.S.) of gasoline.

NOTE:

Follow instructions on can.

If you use OTHER 2-CYCLE oil, mix 8 ounces (U.S.) with 1 gallon (U.S.) of gasoline.

⚠ SAFETY WARNING:

Gasoline is extremely flammable and highly explosive under certain conditions. Always stop engine, and do not smoke or allow open flames or spark when refueling.

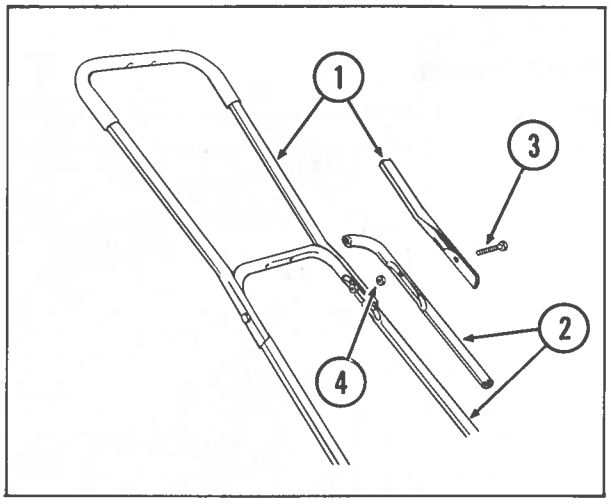
HANDLE ASSEMBLY INSTRUCTIONS

NOTE:

Lifting of mower by engine cover may cause permanent engine damage. Disconnect spark plug wire and lift at front and back of blade housing only.

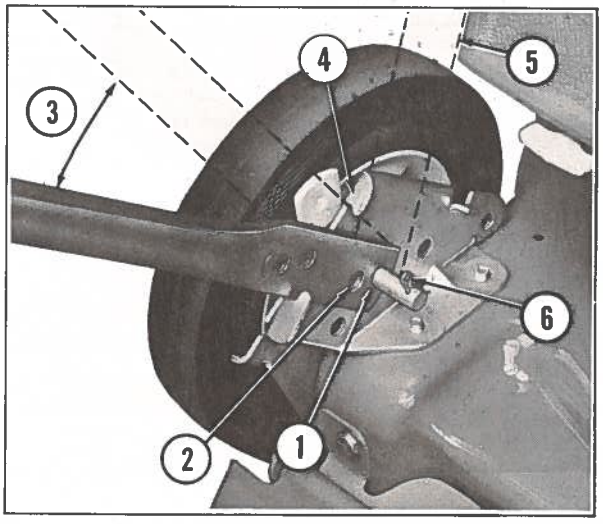
PUSH MODEL

1. After removing the handle sections from the carton, locate the handle screws and nuts supplied in the hardware package.



1. Upper Handle Section
2. Lower Handle Section
3. Handle Screws
4. Nut

2. Secure handle sections with two screws and nuts provided.
3. Squeeze lower handle and slide over bracket studs. Attach leg of lower handle section with four holes to left handle bracket as shown. Secure with lock pins.



LEFT HANDLE BRACKET ILLUSTRATED

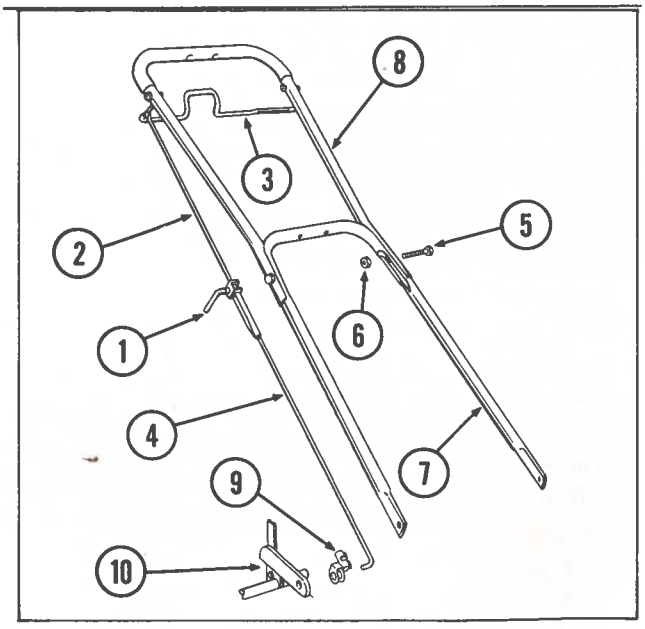
1. High Handle Hole
2. Low Handle Hole
3. Normal Operating Position
4. Handle Bracket Upstop
5. Storage Position
6. Lock Pin

SELF-PROPELLED MODEL

1. Remove the handle sections from the carton. Locate the handle screws and nuts supplied in the hardware package.
2. Secure handle sections with two screws and nuts provided. Squeeze lower handle section and slide over bracket studs. Handle assembly must be installed with the leg of the lower handle section that contains four holes attached to the left handle bracket when you face the rear of the mower. Secure handle to bracket with lock pins. See left handle bracket illustrated.
3. Observe how rod end clip (9) is attached to lower self-propel control rod (4). Remove rod end clip from lower self-propel rod. Place rod end clip on clutch arm (10) located inside of right hand handle bracket aligning the hole in the clutch arm (10) with the holes in the rod end clip (9). See Figure A. Insert end of lower self-propel control rod (4) into rod end clip (9) and clutch arm (10) as shown in Figure B. Snap rod end clip (9) onto lower control rod (4). See Figure C.

SAFETY WARNING:

The lower self-propel control rod must be assembled to clutch arm as shown in Figure D (next page). If not, the self-propel mechanism will not return to neutral when the control lever is released from the engaged position.



1. Clamp Screw (Tighten In Position Illustrated)
2. Upper Control Rod
3. Control Lever (In "Neutral" Position)
4. Lower Control Rod
5. Handle Screw
6. Nut
7. Lower Handle Section
8. Upper Handle Section
9. Rod End Clip
10. Clutch Arm

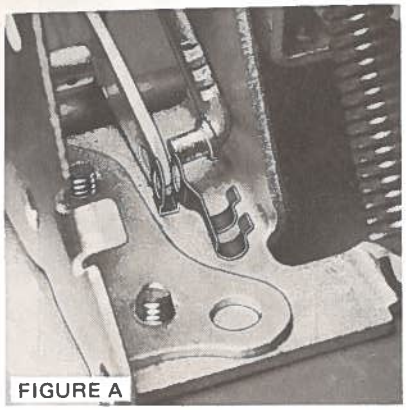


FIGURE A

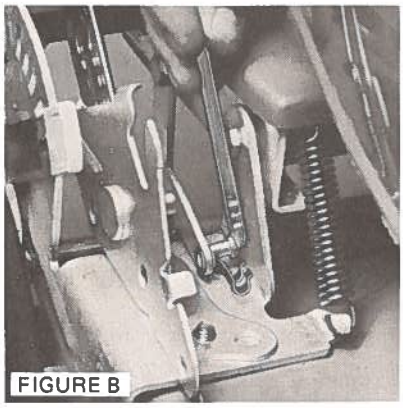


FIGURE B

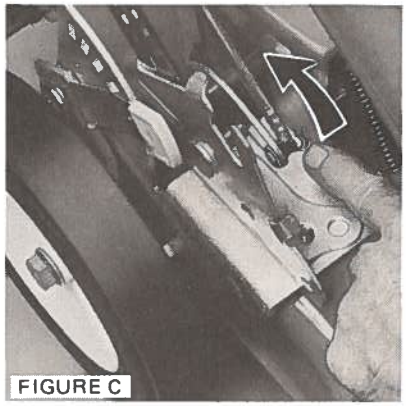


FIGURE C

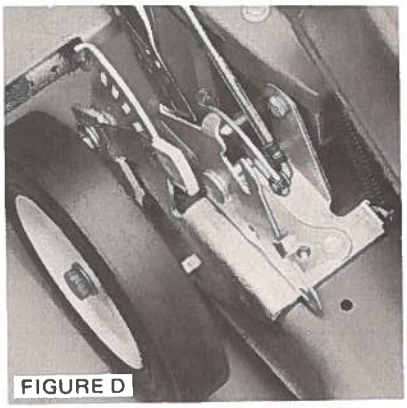
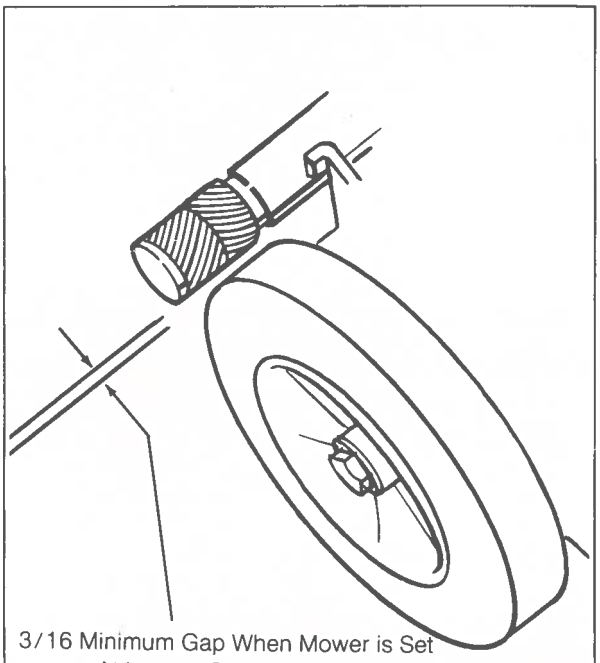


FIGURE D

4
SEE
NEXT
PAGE



3/16 Minimum Gap When Mower is Set At Lowest Cutting Height

FIGURE E

4. With control lever (3) in "neutral" position (in free state control lever will be away from handle as shown) and with the lower control rod (4) also in its free state (clutch arm (10) resting on handle bracket mounting surface. See Figure D), secure the upper (2) and lower (4) control rods together with clamp screw (1) as tight as possible with hand pressure.

5. When all height adjusters are in the #1 position (lowest cutting height) and control lever in "neutral" position, drive rollers must not be contacting rear tires. A minimum gap of 3/16 inch should appear. See Figure E. If a gap of less than 3/16 inch appears, then the mower should be adjusted as follows on page 20.

⚠ SAFETY WARNING

Improper adjustment of the self-propel control components may result in operator loss of drive control.

STORAGE POSITION - ALL MODELS

To conserve space while storing between mowings, the handle may be leaned against wall, workbench, etc. Squeeze lower handle together and move forward past the upstops.

NOTE:

To release handle from storage position, squeeze lower handle together and return to the normal operating position.

HANDLE HEIGHT POSITIONS - ALL MODELS

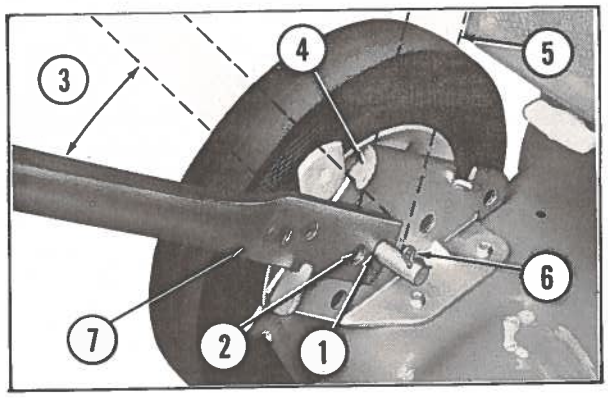
The handle height can be adjusted to a high or low position. This is determined by which set of holes in the lower handle are used to attach the handle to the handle bracket.

NOTE:

On self-propelled model, loosen clutch control rod before attempting to change handle height. Readjust control rod after handle height has been changed as shown on page 5. Self-Propelled Model

SAFETY WARNING

Replace lock pins after adjustment and make sure each side of lower handle contacts side of handle bracket and bracket upstop. A loose handle, or improper function of the upstop may cause loss of operator control.



LEFT HANDLE BRACKET ILLUSTRATED

1. High Handle Hole
2. Low Handle Hole
3. Normal Operating Position
4. Handle Bracket Upstop
5. Storage Position
6. Lock Pin
7. Leg of Lower Handle Section with Four Holes

GRASS CATCHER ACCESSORIES

A grass catcher accessory is available for both push and self-propel utility models. Follow the installation instruction furnished with the kit and keep as part of your Owner's Manual. Kit Part No. 681964. Bag only, Part No. 682210.

SAFETY WARNING:

DO NOT raise chute deflector except to install catcher. Deflector provides protection against objects being thrown by the blade through the chute opening and reduces exposure to the rotating blade.

STARTING INSTRUCTIONS

SAFETY WARNING:

Before operating your new LAWN-BOY, check all nuts and bolts for tightness. As the machine is used, periodically check all nuts and bolts, especially the blade bolt, (torque blade bolt to 30-32 ft. lbs.). Disconnect spark plug lead during check. Connect spark plug lead before starting.

SAFETY WARNING:

Before starting engine make certain self-propel control lever is in the "NEUTRAL" position. Do not defeat the purpose of the "DEADMAN" self-propel control lever by holding the lever in the "engaged" position using tape, wire, etc. This will result in operator loss of drive control.

1. Fill tank with proper fuel mixture. Refer to page 3 for correct mixture.
2. Open fuel shutoff valve. Always store or transport mower with fuel shut-off valve in the "OFF" position.
3. DEPRESS PRIMER 1 OR 2 TIMES. A warm engine may not need priming. In cool weather (below 50°F.) Additional priming may be necessary.
4. Turn "OFF-ON" switch to "ON."
5. Place foot on mower housing in designated area to hold mower steady.
6. Pull upward on starter handle. DO NOT ALLOW IT TO SNAP BACK. HOLD STARTER HANDLE UNTIL CORD IS FULLY RECOILED. If the engine fails to start after 3 pulls on the starter handle, prime twice and pull starter handle again. Should the engine falter after starting, prime as required to keep engine running until it is warm.

SAFETY WARNING:

To insure operator control, the mower should be started only on a level surface.

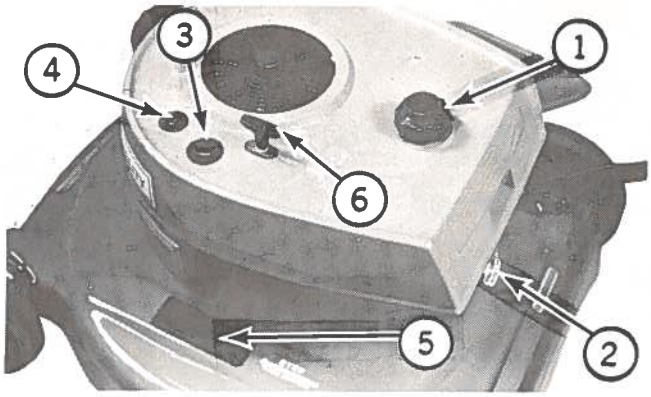
7. To stop engine, turn "OFF-ON" switch to the "OFF" position.

When starting engine immediately after previous running, it is normally not necessary to use the primer. However, if the engine fails to start after several revolutions, push primer once and release.

If engine floods, remove air filter and squeeze dry. Pull engine through 6 to 10 times without priming. When engine starts, stop it and replace the filter. Start it again without priming.

NOTE:

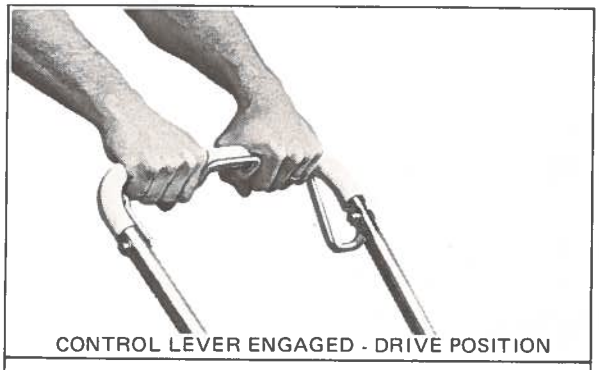
If engine continues to flood, and will not start, remove spark plug and dry it off.

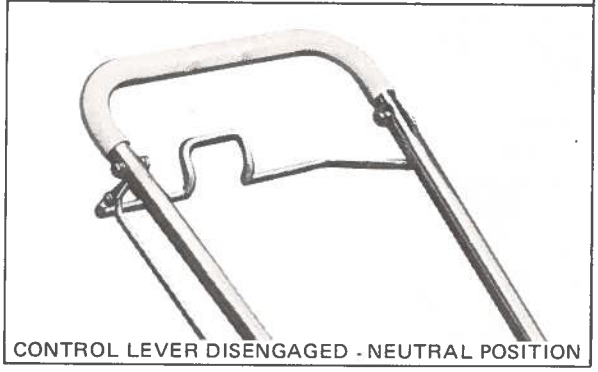


SELF-PROPELLED OPERATION

Before starting engine make certain that the self-propel control lever will always return to the "NEUTRAL" position. If not, check for proper installation and adjustment of the lower self-propel control rod. If after checking the control rod installation and adjustment, the self-propel control lever still will not return to the "NEUTRAL" position, see your authorized LAWN-BOY Service Dealer for further adjustment.

To put mower in motion, pull upward on control lever and hold control lever in drive position as shown. To stop forward motion of mower, release control lever. Mower drive mechanism will only engage, allowing self-propelled operation, when control lever is held in "DRIVE" position. The self-propel mechanism is spring loaded to return to the "NEUTRAL" position when the self-propel control lever is released from the "engaged" position.


CONTROL LEVER ENGAGED - DRIVE POSITION


CONTROL LEVER DISENGAGED - NEUTRAL POSITION

SAFETY WARNING

Failure to repair an improperly operating control lever can result in operator loss of drive control.

"TOUCH AND GO" OPERATION

When mowing in restricted areas it is not necessary to fully engage mower in the DRIVE position, light hand pressure on lever will propel mower. "Touch and Go" system may be employed by engaging and disengaging control lever as required.

MOWER HEIGHTS ADJUSTMENTS

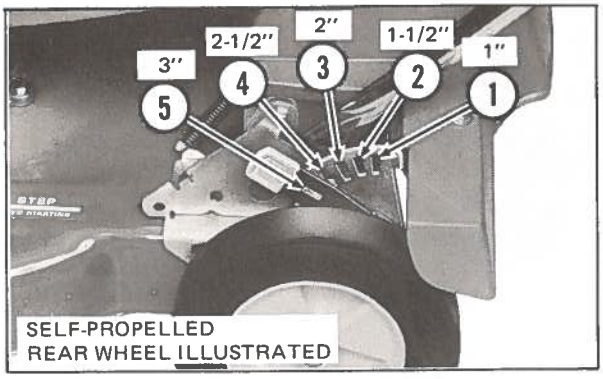
CUTTING HEIGHT

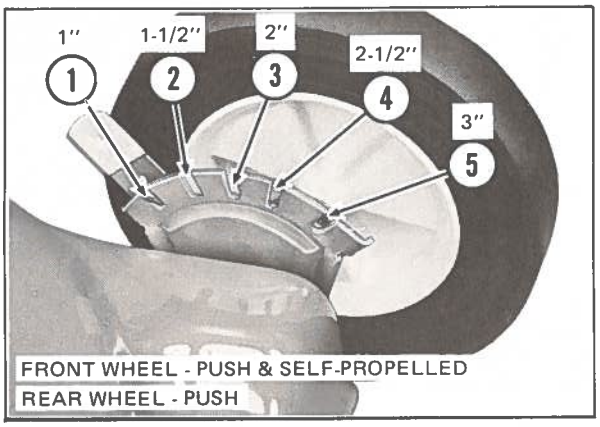
SAFETY WARNING:

Do not attempt to adjust cutting or handle height with engine running because of possible contact with rotating blade.

Your mower is equipped with 5-position instant cutting height adjustment from 1 inch to 3 inches as illustrated. The four wheels are adjusted individually by a lever at each wheel.

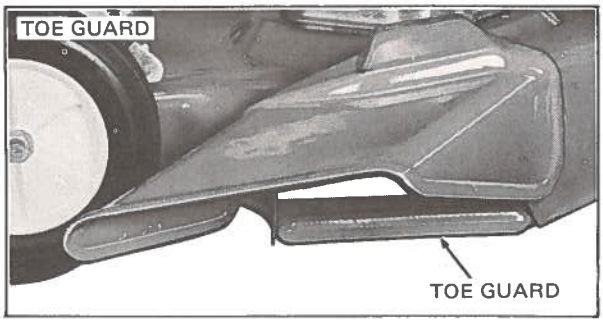
To change cutting height, simply pull the wheel adjusting lever toward wheel slightly and move either forward or backward to desired position. Release the lever and seat it securely in notch. SET ALL WHEELS AT SAME HEIGHT. Upper and lower self-propel control rods do not require readjustment when the cutting heights are changed.

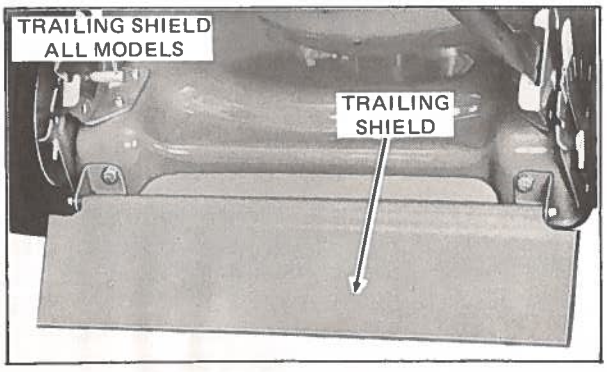


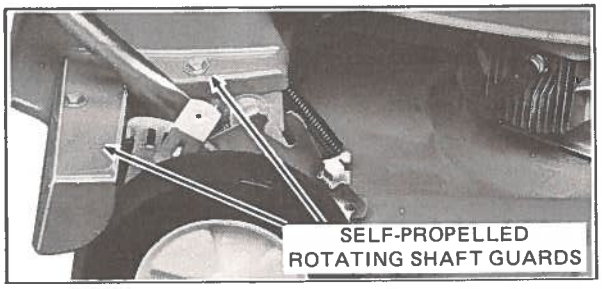


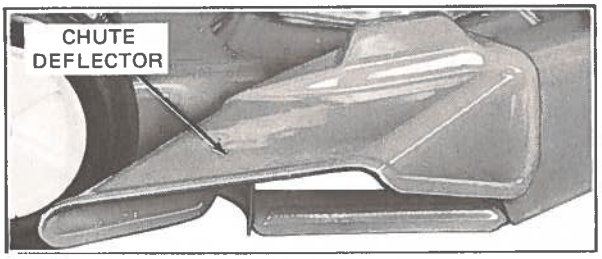
SAFETY FEATURE - ALL MODELS

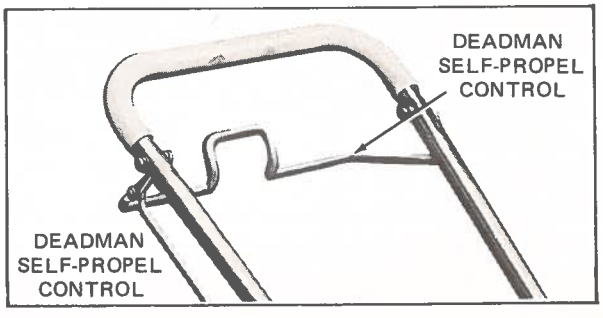
Your LAWN-BOY is equipped with several safety features; ie, toe guard, trailing shield, rotating shaft guard, chute deflector, and deadman control. These should not be removed or tampered with as this will reduce operator or bystander protection.











Maintenance - Repair Section

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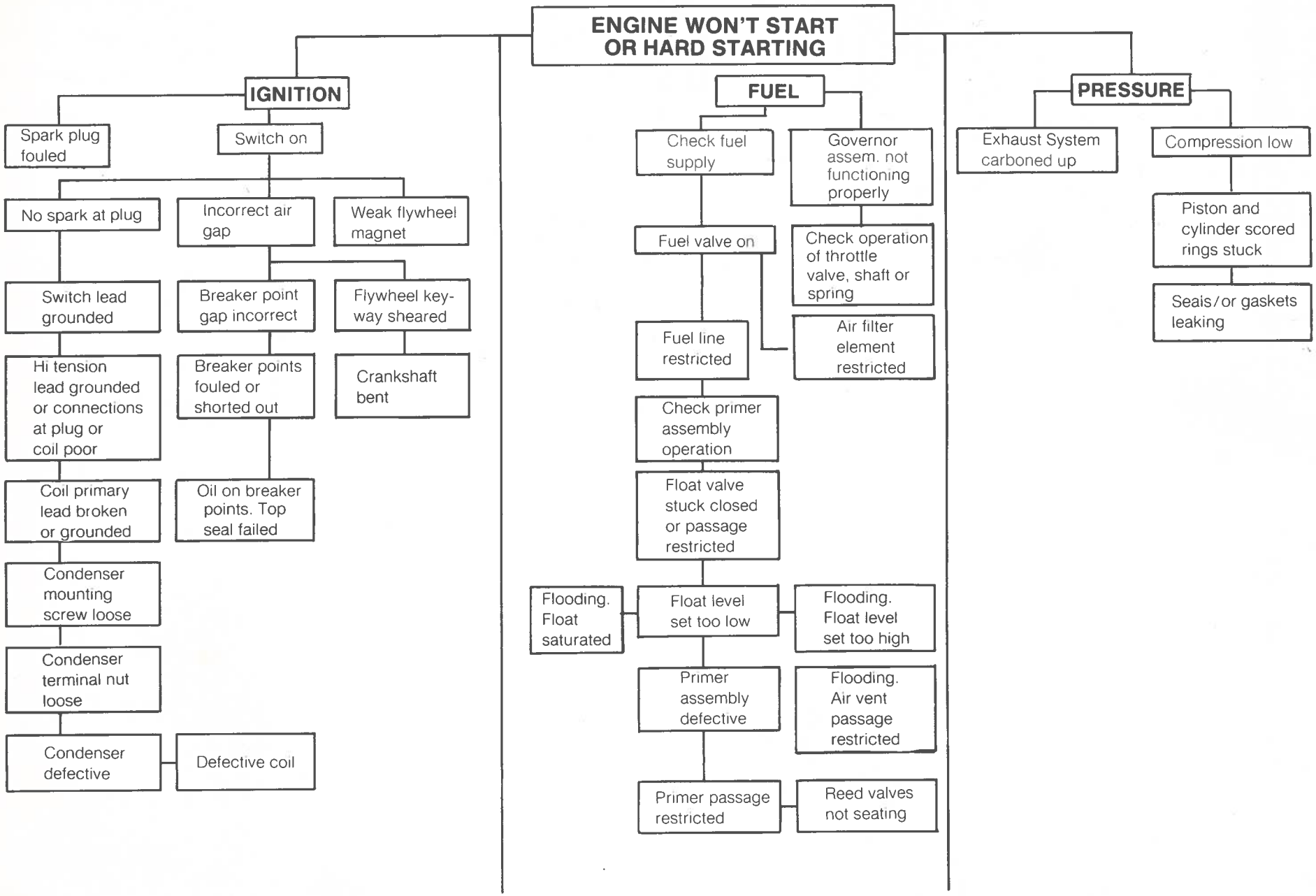
SEE NEXT PAGE

ENGINE TROUBLE SHOOTING CHECK LIST


ENGINE WON'T START OR HARD STARTING
IGNITION
Spark plug fouled
Switch on
No spark at plug
Incorrect air gap
Weak flywheel magnet
Switch lead grounded
Breaker point gap incorrect
Flywheel key-way sheared
Hi tension lead grounded or connections at plug or coil poor
Breaker points fouled or shorted out
Crankshaft bent
Coil primary lead broken or grounded
Oil on breaker points. Top seal failed
Condenser mounting screw loose
Condenser terminal nut loose
Condenser defective
Defective coil
FUEL
Check fuel supply
Governor assem. not functioning properly
Fuel valve on
Check operation of throttle valve, shaft or spring
Fuel line restricted
Air filter element restricted
Check primer assembly operation
Float valve stuck closed or passage restricted
Flooding. Float saturated
Float level set too low
Flooding. Float level set too high
Primer assembly defective
Flooding. Air vent passage restricted
Primer passage restricted
Reed valves not seating
PRESSURE
Exhaust System carboned up
Compression low
Piston and cylinder scored rings stuck
Seals/or gaskets leaking

ENGINE DIAGNOSIS PROCEDURE

Normally, diagnosis takes very little effort, and will probably save a great deal of time in eliminating unnecessary repair work.

1. BEFORE YOU TRY TO START ENGINE
   a. Be sure there is clean fuel in tank.
   b. Be sure gas cap vent and fuel shut-off valve are open.
   c. Be sure ON-OFF switch is in ON position.
   d. Check ON-OFF switch lead.
2. CHECK COMPRESSION
   a. With ON-OFF switch in OFF position, and the high tension lead disconnected, pull engine through several times with starter. Feel for compression as you pull engine through. If engine spins very easily, it has little (if any) compression. With little compression, there will be little or no power.
   b. If engine resists pull of starter rope, it has compression. If you spin an engine with good compression fast enough, you can hear the carburetor sucking air — and kickback noise.
   c. While checking for compression, also listen for any scraping or squeaking internal noises. These noises indicate piston and cylinder scoring. If you hear such noises, do not try to start the engine. Take it to your Lawn-Boy Dealer for service.
3. IGNITION CHECK
   a. Take out the spark plug and examine it. Be sure that the electrodes are clean and the gap is .025". Check the porcelain. If it is cracked, the plug won't fire. If the end of the plug is wet, you know fuel is getting through. As a further check to see that fuel is getting through, place your thumb over the spark plug hole, and pull the starter cord several times. Your thumb should be wet with fuel.

SPARK PLUG

There are many different types of spark plugs intended for various applications and therefore, it is extremely important that the correct plug be used in an engine and torqued correctly. Correct torque is 15 to 18 ft lbs.

LAWN-BOY recommends the use of the Champion CJ-14 spark plug because of its ability to supply, continuously, a hot spark for uninterrupted combustion.

Plugs should be cleaned and gapped every 25 hours of operation.

NOTE:

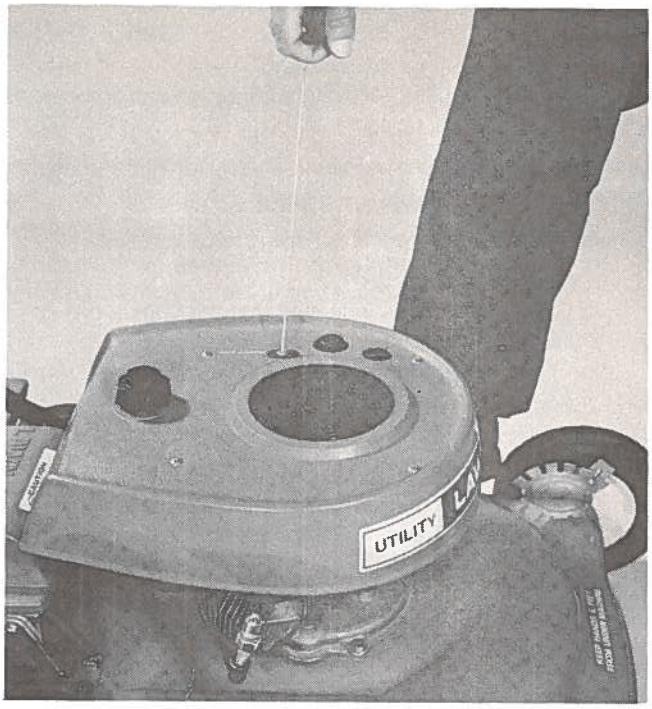
Prior to installing a new plug always check plug gap. Plug gap is not preset at factory.

The correct gap for LAWN-BOY utility engine is .025 of an inch.

NOTE:

DO NOT CLEAN PLUG IN SAND BLASTER.

   b. Check for spark by removing the spark plug and reconnecting the high tension lead to a test plug. Connect the test plug to the engine as shown. Pull the starter rope several times and check the spark at the test plug. A good spark should be hot, blue and snapping. A weak spark is orange, and makes little, if any noise.



A special spark test tool Part No. 426814 is available from your Lawn-Boy Dealer.

   c. If there is no spark, or a very weak spark, ALWAYS try another plug. It only takes a few minutes, and these few minutes could save you hours. BE SURE YOU USE THE RIGHT PLUG — DON'T GUESS. (CJ14)

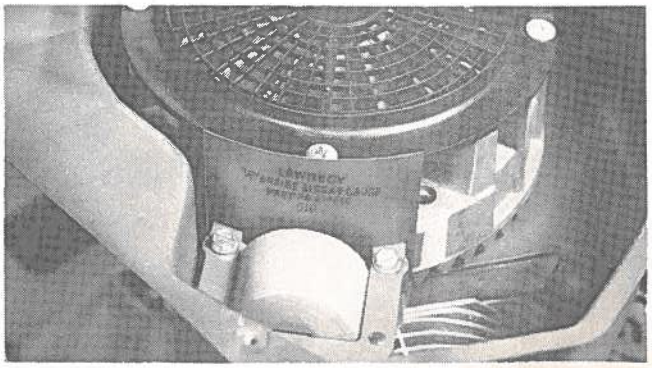
COIL HEEL ADJUSTMENT

The air gap between the coil heels and the flywheel magnets is .010 inch. To check this gap or to reinstall a coil insert a strip of .010 inch non-metallic shim stock between the coil heels and the flywheel magnets.

Torque Screws — 20/25 in lbs.

NOTE:

Use Lawn-Boy Air Gap Gauge Part No. 604659.



4. CARBURETOR DIAGNOSIS
   If you have a spark at the plug (even though a weak spark), check to see that the fuel mixture is getting into the combustion chamber.
   a. Remove spark plug from cylinder.
   b. Place finger over spark plug hole in cylinder and pull starter rope several times.
   c. If fuel mixture is entering cylinder your finger will be wet. If fuel is not entering cylinder you have a carburetion problem or dirt or contamination in the gas tank stopping fuel flow to the carburetor.

IMPORTANT

Always check fuel tank — make sure it is clean and contains no water. Be sure of correct fuel mixture.

Air filter element must be clean. Check for dirt or obstructions in carburetor throat.

Check fuel line to see if fuel is flowing into carburetor.

5. ENGINE DIAGNOSIS
   If your checks have indicated that the engine has good spark, fuel flow and compression, yet engine won't run, or "4-cycles", (ignition every other revolution) check the following:

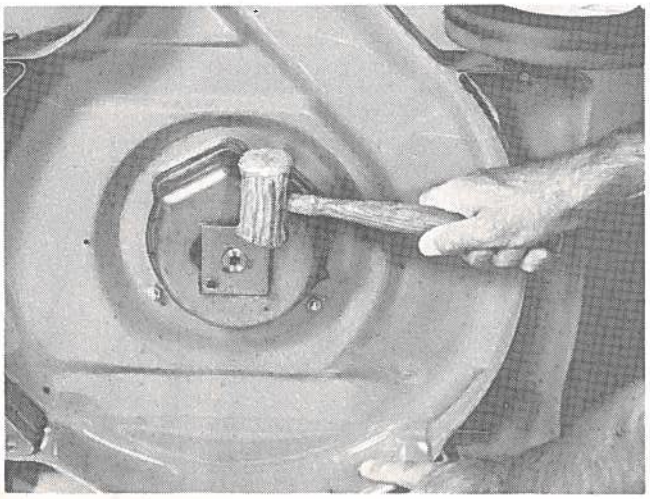
EXHAUST PORTS AND MUFFLER

Excessive carbon deposits present in exhaust ports cause additional wear to engine parts and create a noticeable power loss. The frequency of cleaning out carbon deposits will vary with operating conditions. Approximately every 50 hours and at the close of the mowing season check for excessive carbon in exhaust ports and muffler tube.

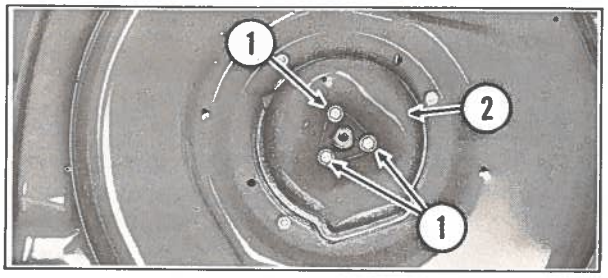
⚠ SAFETY WARNING:

To prevent starting the engine, disconnect and remove spark plug prior to removing muffler.

To clean the exhaust ports, tip the mower on its side. Remove the blade, blade stiffener and the blade adapter hub. The hub is tapered to fit the taper of the crankshaft. Tap the hub with a fiber or lead hammer to loosen it from the crankshaft.

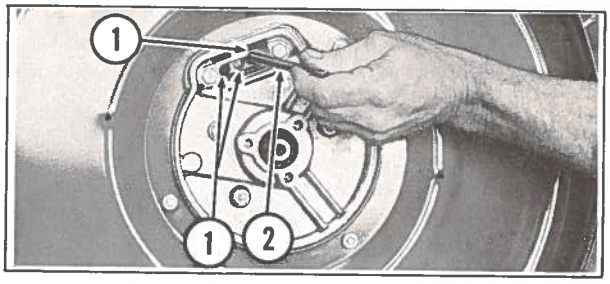


Remove the bolts securing the muffler cover to the muffler plate, as shown, and remove the muffler cover.



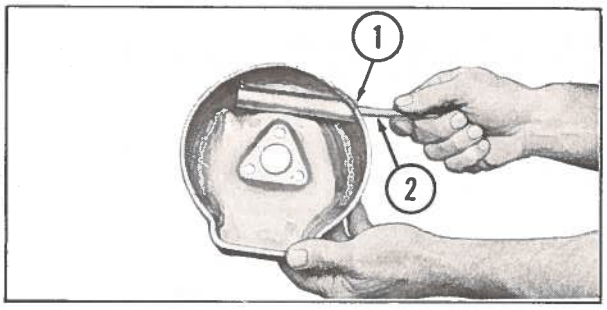
1. Muffler Bolts 2. Muffler

Pull starter handle slowly until piston covers the exhaust ports. Using a 3/8 inch diameter wooden dowel, insert dowel into ports to loosen carbon deposits as illustrated. DO NOT DAMAGE PISTON BY USING METAL INSTRUMENT. Place mower in operating position and pull starter handle several times to blow out carbon.



1. Exhaust Ports 2. Dowel

Clean carbon deposits from muffler cover and exhaust tube and wipe muffler clean. Secure to mower using hardware previously removed. Replace the blade. (torque blade bolt to 30-32 ft. lbs.). Replace and connect spark plug.



1. Operating in Muffler Tube 2. Dowel

⚠ SAFETY WARNING:

When reassembling muffler cover, assemble fasteners (screws) with fingers to engage previously formed threads. Do not force reinstallation as the screw will form a new set of weaker threads which may eventually strip and the screw may become a thrown object. Torque to 140-170 inch lbs.

NOTE:

Using LAWN-BOY 2-CYCLE oil in required amount will minimize carbon build-up. Most oil is not made for burning and therefore, results in heavy accumulation of carbon.

FUEL SYSTEM INSPECTION

SAFETY WARNING:

Gasoline is extremely flammable and highly explosive under certain conditions. Always stop engine, and do not smoke or allow open flames or spark when refueling.

Start your inspection with the fuel used in the 2-cycle engine. Make sure your fuel mix is correct. The supply can, from which fuel is poured into the engine tank, should have a water and dirt retarding screen. Extreme changes in temperature can cause heavy condensation in a closed fuel tank that is NOT FULL. ALWAYS KEEP TANKS FULL WHEN MOWER IS NOT IN USE, DURING THE MOWING SEASON. During storage, the tank should be empty, and the mower stored in an area not subject to extreme temperature change.

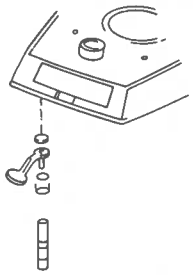
SAFETY WARNING:

To prevent possible explosion or ignition or vaporized fuel, do not store mower with fuel in tank or carburetor in enclosure with open flame. (Example: Furnace or water heater pilot light.)

If you find water and/or dirt in the tank, a double screen funnel or a flexible nozzle with screen will help prevent future problems. If water and/or dirt is found be sure to remove it before starting the mower.

FUEL TANK VENTING

Fuel tanks must be vented to prevent vacuum forming and stopping flow of fuel. Tank caps have a plain vent hole. A closed vent will create a vacuum in the tank as fuel is used — the engine will run a few minutes and stop. In a few minutes the vacuum will decrease and the engine can be started again, but it will stop again in a few minutes. The vent hole can become clogged with dirt, inspect and clean as required. One way to assure the vent is open is to *blow* air gently through the vent hole from the outside of the cap with the fuel cap removed from the tank.



SHUT-OFF VALVE

The screen assembly or the shut-off valve can become clogged. This can be checked easily by removing the fuel hose, opening the valve and observing for fuel flow through the valve. Replace the valve assembly if leakage is visible . (part 681526)

NOTE:

Shut-off valve is secured to fuel tank with a spring clip; exercise care when re-installing to fuel tank.

FUEL LINE

Inspect the fuel line. If cracked, spongy, or otherwise not fit for good safe use, replace. DON'T TWIST FUEL LINE — INSERT ON CONNECTIONS WITH FINGERS, NOT PLIERS.

SAFETY WARNING:

Do not substitute with inferior fuel hose which may cause leakage from premature deterioration. Leakage of fuel may cause an explosion and/or fire.

AIR CLEANER

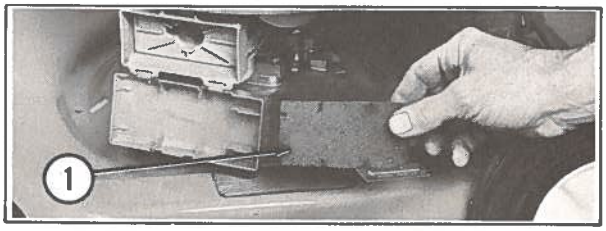
A dirty air cleaner element will create a noticeable power loss, and may reduce engine life.

Clean every 10 hours, or more frequently if dusty conditions exist. To remove: Grasp the cover, loosen snap and open cover, remove element.

Wash element in laundry detergent or kerosene. Wring out and apply 10 to 15 drops of LAWN-BOY oil or equivalent. Squeeze it several times to distribute the oil evenly. When replacing element, make certain the element does not pucker in the filter chamber area allowing direct passage of air and dirt into the carburetor. Install the cleanest side of the element facing the carburetor and snap cover in place.

NOTE:

Operating engine without filter element, or filter element without sufficient oil will shorten engine life.



1. Element

THE UTILITY ENGINE OPERATES AT A FIXED SPEED OF 3200 RPM.

NOTE:

Return the mower to your Lawn-Boy Dealer for service on the governor and breaker points.

CARBURETOR

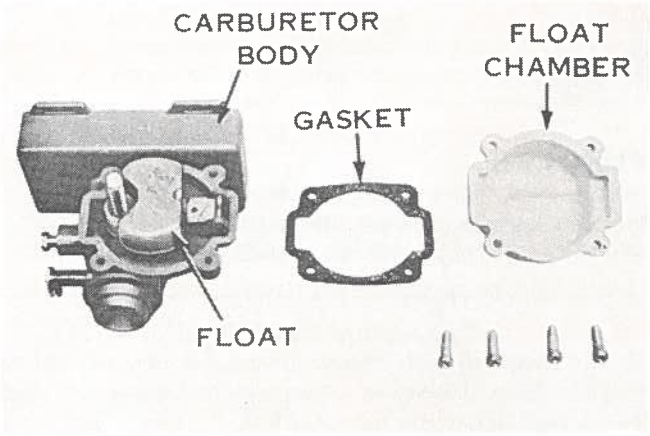
CARBURETOR COMPONENTS

This carburetor is constructed of a special injection molded plastic material. The body and air filter chamber is a one-piece plastic assembly which "plugs" into the reed plate and is secured by a single screw. An O-ring installed between the carburetor and reed plate insures positive sealing.

A hinged type float of special cork material is sealed with an epoxy. During inspection, if the float appears dull in appearance it should be replaced. The float in this carburetor requires a float setting of 11/16 of an inch from carburetor body to top of float measured when the carburetor is upside-down. As fuel enters a single metered jet it is mixed with incoming air to form the correct combustible mixture. The amount of fuel flow through the metering jet is regulated by the altitude needle.

NOTE:

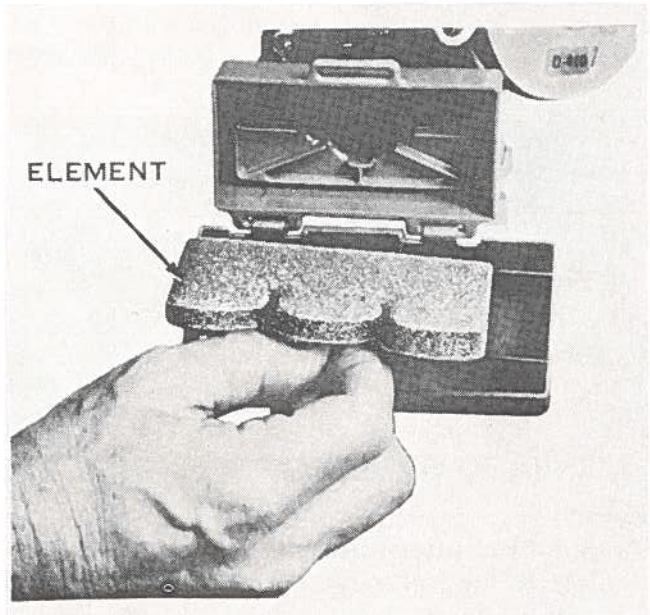
The governor will control the amount of fuel entering the engine. The purpose of the atmospheric pressure adjusting needle is to mix the right amount of fuel with the correct amount of incoming air.



AIR FILTER ASSEMBLY

If engine is flooded, fuel can drain back into filter. As filter becomes saturated, incoming air picks up more fuel, causing greater flooding. A puckered filter will allow air and dirt to bypass filter. Make certain that filter covers cup area. If oiled properly, filter is very efficient. First wash out with laundry detergent or kerosene, then apply 10 to 15 drops of oil. Squeeze several times to distribute oil. If engine "smokes" for no apparent reason, filter may be saturated with fuel mix or may need cleaning.

To remove, grasp the detachable cover, loosen snap and fold cover down.



NOTE:

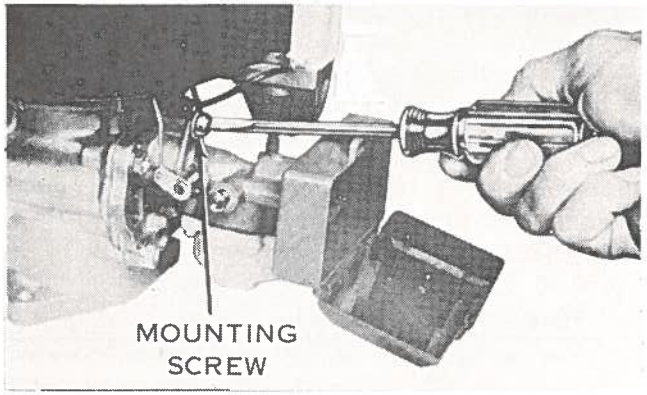
Reinstall filter in the same position from which it was removed to prevent imbedded particles in intake side from entering carburetor.

CARBURETOR REMOVAL

1. The modular carburetor is attached to the reed plate assembly by a single screw.

NOTE:

During assembly apply OMC Screw Lock (part no. 384848) to threads of mounting screw.

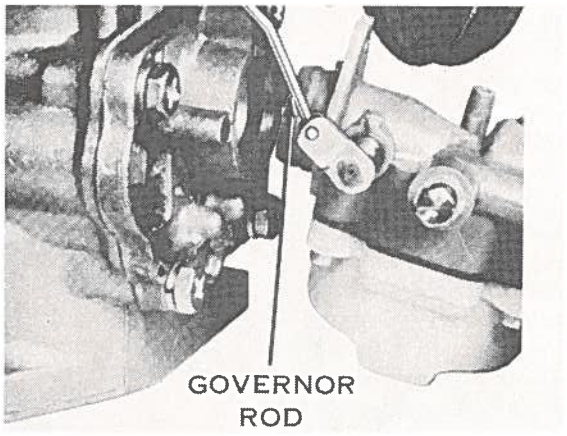


2. Pull carburetor from reed plate assembly. Do not force removal by pressing vertically (up and down), horizontally (right to left) or twisting (circular motion). To prevent damage to the o-ring seal, pull straight to the rear with minimum rotation.

NOTE:

Do not bend or damage the governor rod and/or throttle arm of the carburetor.

3. Check O-ring in reed plate assembly for damage. We recommend replacing O-ring should damage or excessive "out-of-roundness" be evident.

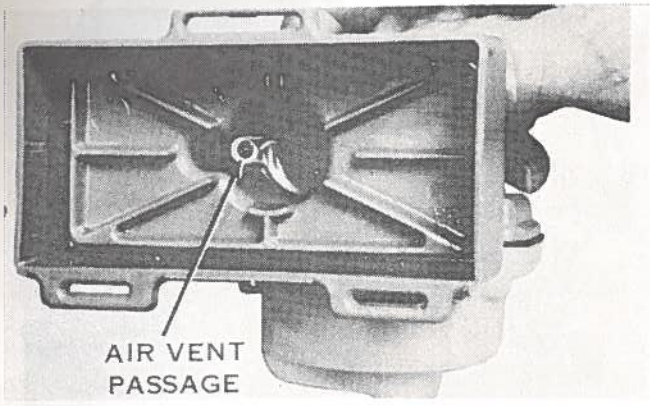


CLEANING CARBURETOR

The carburetor assembly is injection molded plastic. DO NOT clean using a standard carburetor cleaner. Disassemble carburetor components, wash and clean using a good petroleum solvent, dry and clean parts with compressed air — DO NOT dry using a cloth, lint may block passages impeding proper carburetion.

After cleaning, inspect all parts. Check float and fuel valves for cracks or damage. Check throttle shaft, valve and spring for smooth operation. Check float chamber for cracks or damage. Check altitude needle and O-ring for damage. Check air vent passage which allows air to flow into the float chamber. If this passage should become restricted with dirt

and/or debris the engine will not run correctly or stop running and flooding the carburetor will occur. Check gasket for cracks or wear and replace if necessary.

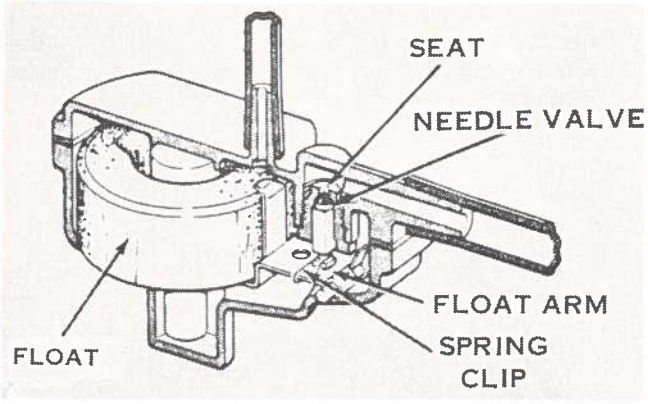


NOTE:

If any part appears worn or damaged, replace it. To ensure proper float action the float must be correctly installed in float chamber (not binding). Use needle nose pliers to secure hinge on float arm to pin.

FLOAT AND VALVE ASSEMBLY

The float valve consists of a needle and seat assembly, activated by a float in the carburetor bowl. The steel needle is rubber tipped and the seat brass. This combination eliminates possible sticking and provides a perfect seal. The needle rests on float arm, held in place by a spring clip.



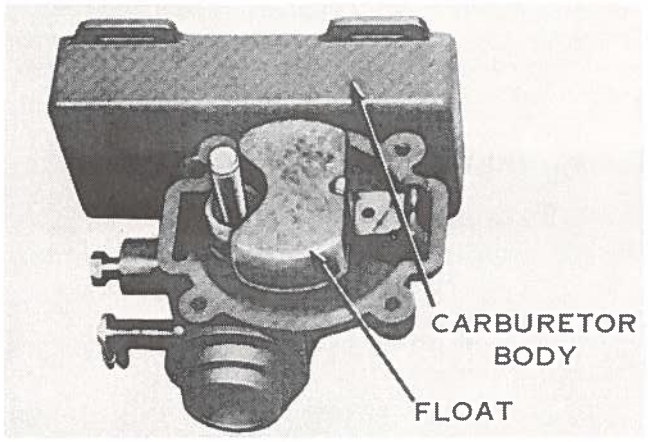
Operation is automatic. When float bowl is empty, float rests on bottom of bowl. As fuel enters bowl of carburetor, float rises, moving needle valve into seat and shutting off fuel. As engine uses fuel, float drops slightly, allowing more fuel to enter bowl, maintaining a constant fuel level in bowl.

Needle, seat and spring clip must be replaced as an assembly. They are matched to form a perfect seal Part No. 681741.

Remove float bowl and examine appearance. Float should be glossy because of epoxy sealer. If dull in appearance, or portions of epoxy have chipped away — replace float.

NOTE:

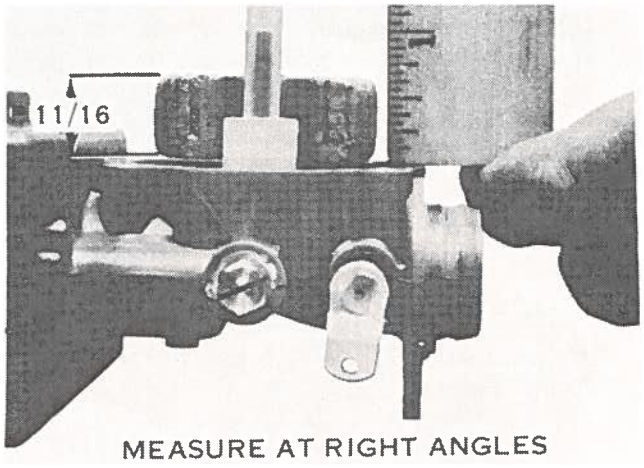
Do not clean float with any type of solvent or carburetor cleaner. Replace it.



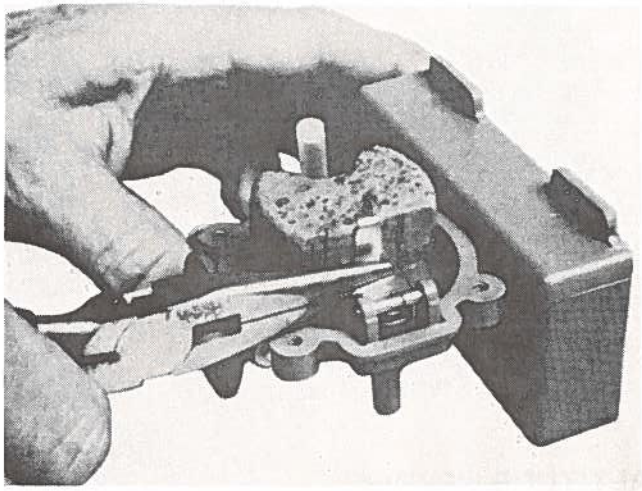
FLOAT ADJUSTMENT

Float Setting

Remove float bowl and gasket. Invert carburetor. With float arm resting on float valve needle, the top of float should be 11/16 inch above edge of carburetor body as shown. Obtain measurements at two points at right angles to each other.



If adjustment is required; using needle nose pliers bend float arm as shown. DO NOT bend float arm by applying pressure to float, this will damage rubber tip on inlet needle.



Check hinge on float arm to be sure it is secured to pin. Use needle nose pliers and tighten hinge. The hinge should be clamped tight enough so that the pin will swivel in the carburetor instead of the arm turning on the pin.

NOTE:

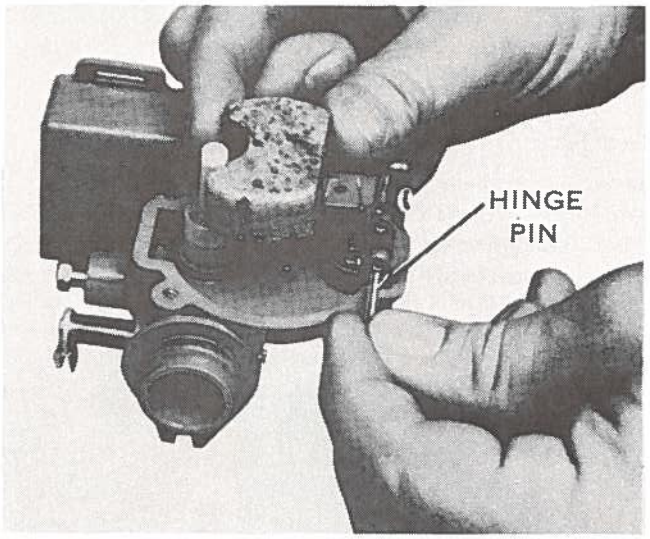
Tightening hinge to pivot pin will prevent inlet needle from not seating correctly when mower crosses uneven terrain. This condition is called "fluttering."

FLOAT VALVE AND SEAT ASSEMBLY

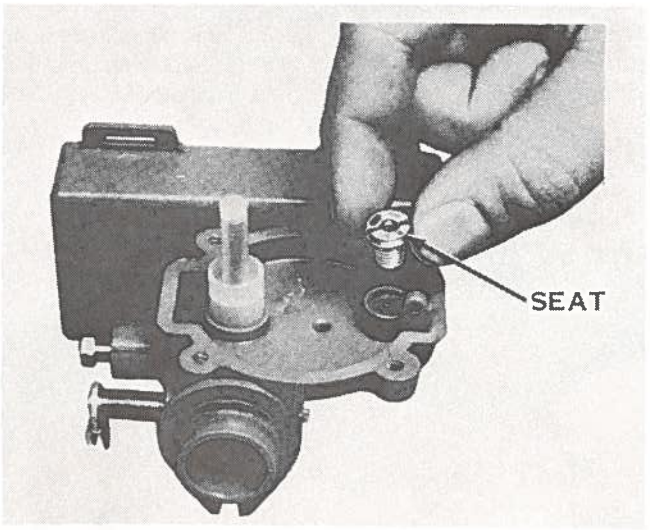
NOTE:

The float valve and seat must be replaced as an assembly. They are matched to form a perfect seal Part No. 681741.

1. Remove hinge pin and remove float and valve. Remove spring clip securing valve to float arm.



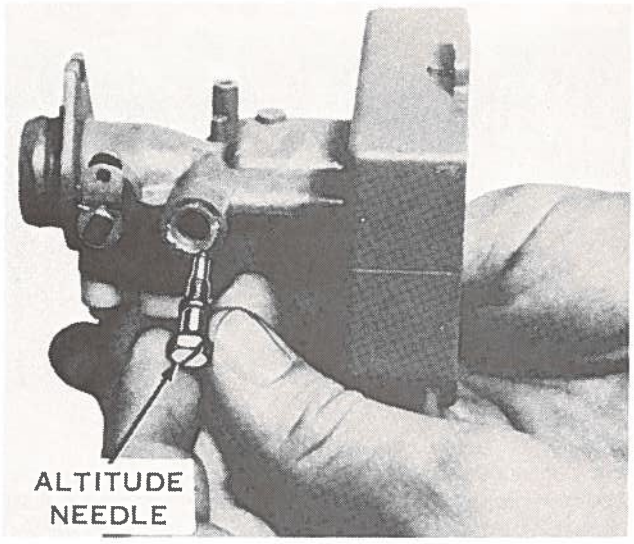
2. Use a wide blade screwdriver to remove or install seat from carburetor body. When reinstalling the seat, tighten securely. Exercise care when tightening seat to prevent damaging the seat.



ALTITUDE NEEDLE

The altitude needle has a rubber O-ring around it to seal the threads and prevent air from leaking through. It also serves as a locking feature to prevent the altitude needle from vibrating out of carburetor body.

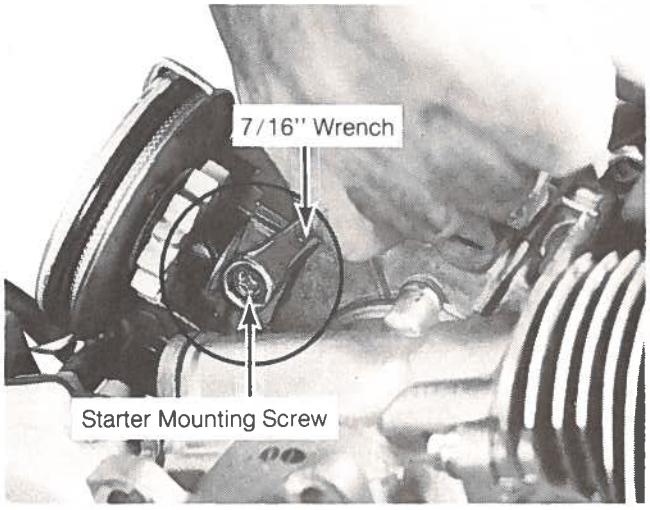
The presetting position is ONE TURN OFF THE SEAT. Use caution when installing this needle as damage may occur to the carburetor body or the needle if it is tightened excessively.



REMOVING STARTER ASSEMBLY

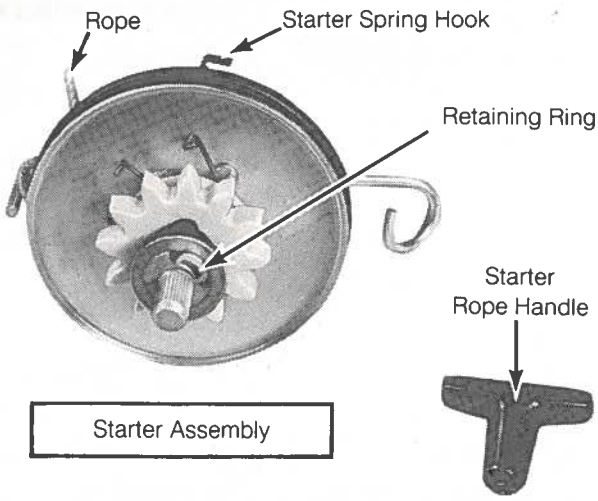
To remove the complete starter assembly on the utility engine, proceed as follows:

1. Drain the fuel from gas tank.
2. Remove engine shroud, primer and fuel hoses.
3. Remove starter rope handle and let rope gradually recoil through the hole in the top of the air baffle.
4. Remove starter mounting bolt on the underneath side of the armature plate and take out complete starter assembly.



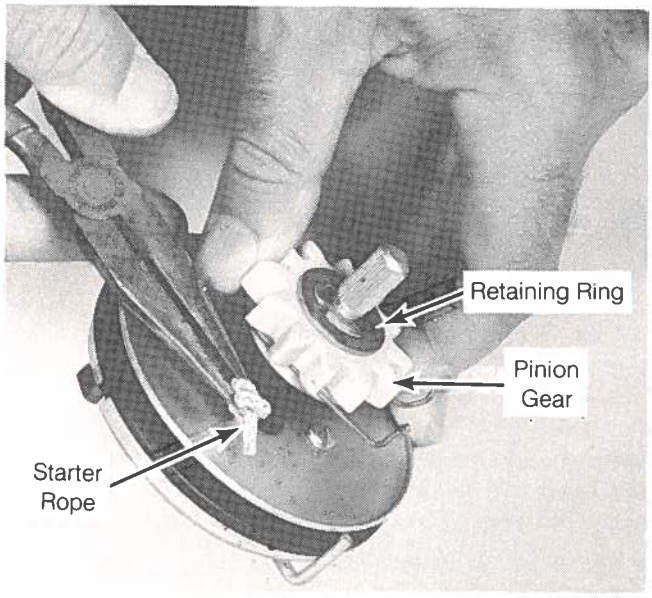
⚠ SAFETY WARNING:

Do not remove the retaining ring (See photo). The starter is under tension and its release can result in severe injury.



REPLACING STARTER ROPE

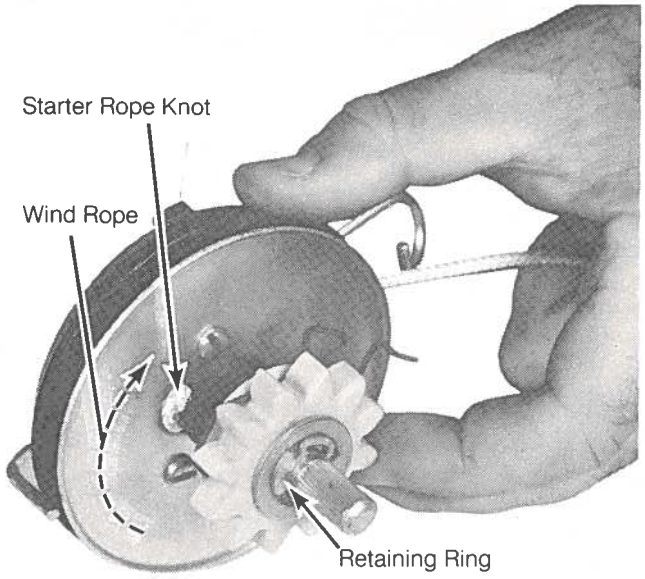
Unwind starter rope, rotate pinion gear out against washer and retaining ring. Pull knotted end of rope out using needle nose pliers as shown and untie or cut knot off.



⚠ SAFETY WARNING:

Do not remove the retaining ring (See photo). The starter is under tension and its release can result in severe injury.

Thread new rope through hole, tie overhand knot, pull knot down into the recessed cavity. Wind rope clockwise with the pinion facing you. Pigtail on knot must be tucked into cavity as shown Part No. 607874.



When installing a new starter pinion spring it should be stretched only far enough to allow it to snap into the groove of the nylon starter pinion. A distorted spring will not grip the pinion properly and the pinion will not engage the teeth on the flywheel when the starter rope is pulled. The prongs of the starter pinion should be approximately 1/4" or less apart when the spring is off the starter pinion.

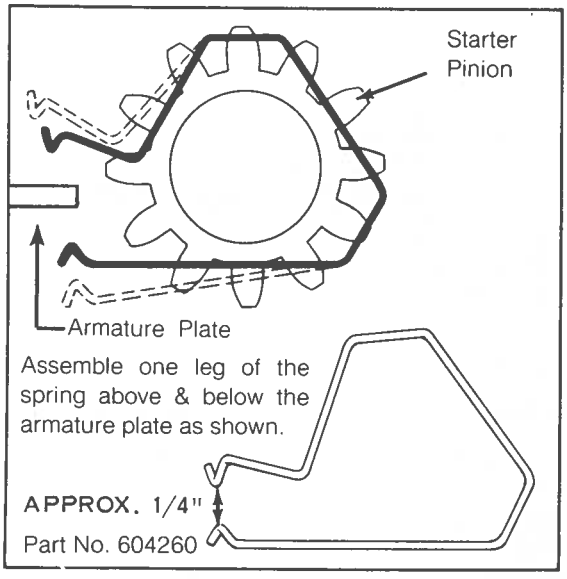
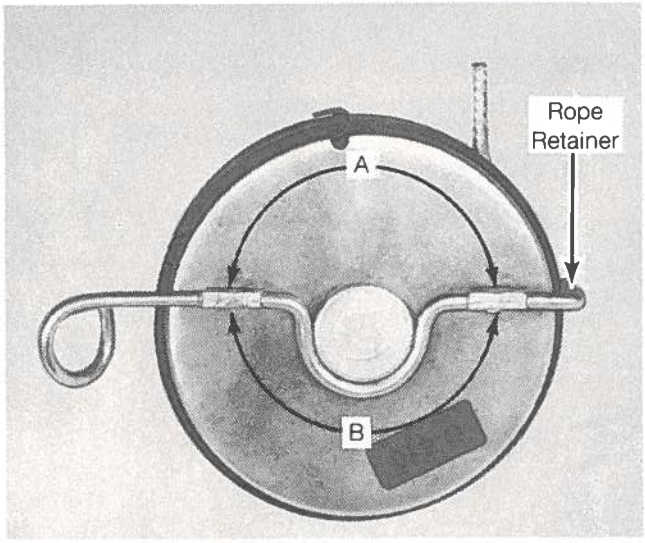


Fig. 1

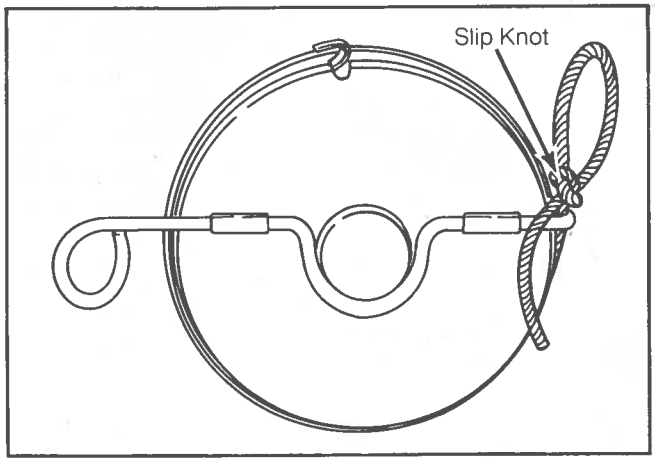
CORRECT STARTER ROPE PRELOAD

If the end of the rope is in segment A , wrap rope by the rope retainer one time.

If the end of the rope is in segment B , wrap rope by the rope retainer twice.



After setting proper preload, as described ("A" or "B"), pull out approximately 12" of rope and tie a slip knot as shown below and let the spring tension hold the knot against the rope retainer as shown.



Remount the starter assembly in the same order it was originally being sure to place one leg of the pinion drag spring on each side of the armature plate. See Fig. 1, p. 17.

Check to make sure the starter spring hook is located up or 12:00 o'clock as shown. Fig. 2. Securely tighten the mounting screw.

Feed the rope through the rope guide in the air baffle.

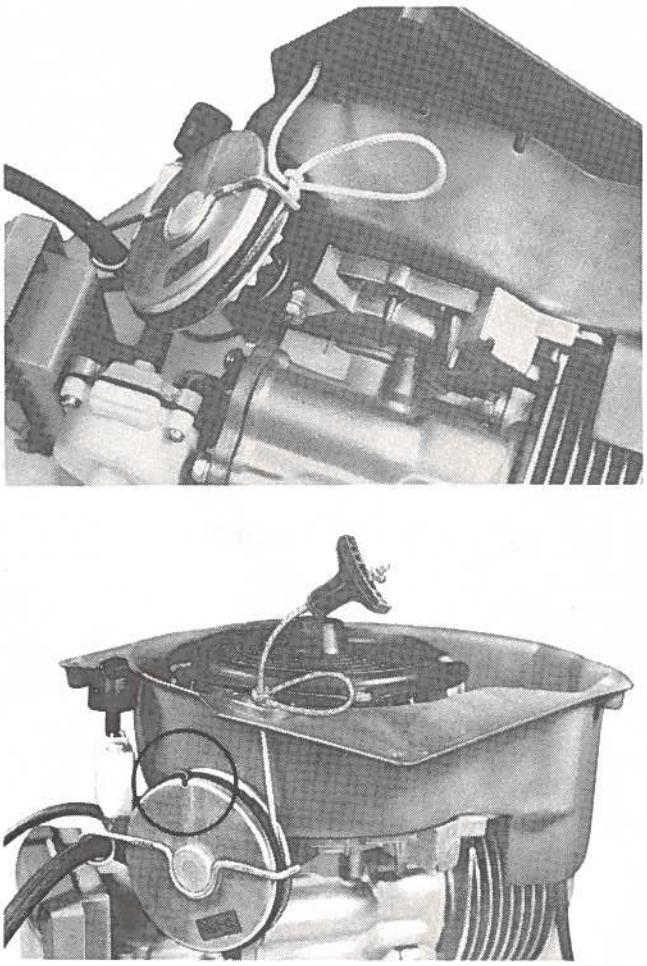


Fig. 2

Install the starter handle and tie a knot in the rope. Then pull out the slip knot from the starter rope anbd let it retract slowly.

NOTE:

When starter rope is pulled all the way out, the pulley must still turn before bottoming of the recoil spring occurs. Otherwise, recoil spring life will be reduced.

If further starter servicing is needed return mower to an Authorized Lawn-Boy Service Dealer.

BLADE

SAFETY WARNING:

To prevent starting of engine, disconnect spark plug wire before checking or sharpening blade. Sharpen only cutting portion of blade.

KEEP BLADE SHARP AND BALANCED

Always keep blade sharp and properly balanced. To check balance, place blade on saw as illustrated. Mounting hole must be centered on saw. If necessary, grind off heavy end of blade until proper balance is attained.

⚠ SAFETY WARNING:

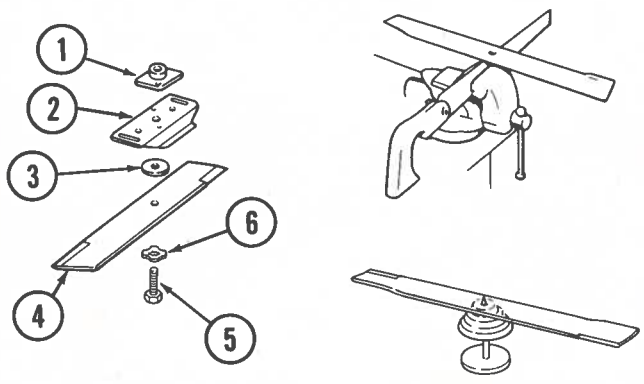
To prevent possible eye injury when grinding, always wear proper eye protection.

NOTE:

When installing blade after sharpening, torque blade bolt to 30-32 ft. lbs.

⚠ SAFETY WARNING:

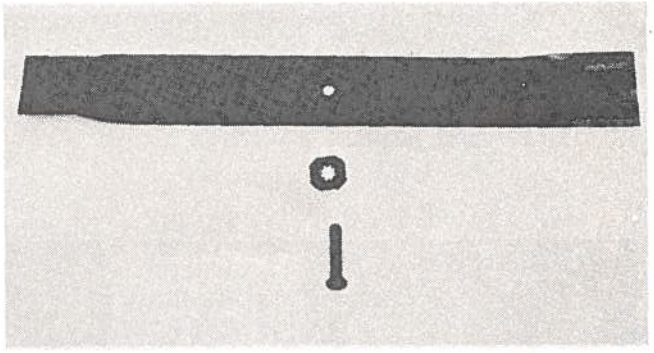
Always use original equipment replacement blade and attachment hardware to insure compliance with safety specifications. When reinstalling blade, be sure parts are replaced in the same sequence in which they were removed. Always replace blade with curved edge up (toward housing). Lockwasher must be installed with cupped surface and triangular points mounted towards blade.



1. Collar
2. Stiffener
3. Washer
4. Blade
5. Blade Bolt
6. Blade Lockwasher

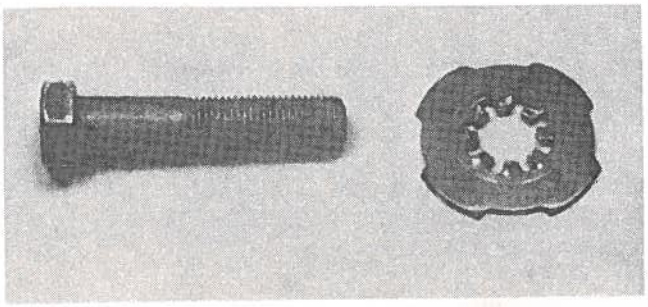
The blade bolt, part no. 609960, is a special bolt with a SPECIFIC HARDNESS AND STRENGTH. The blade lockwasher, part no. 605339, is a special lockwasher.

The lockwasher must be installed with cupped surface and triangular points mounted toward the blade.



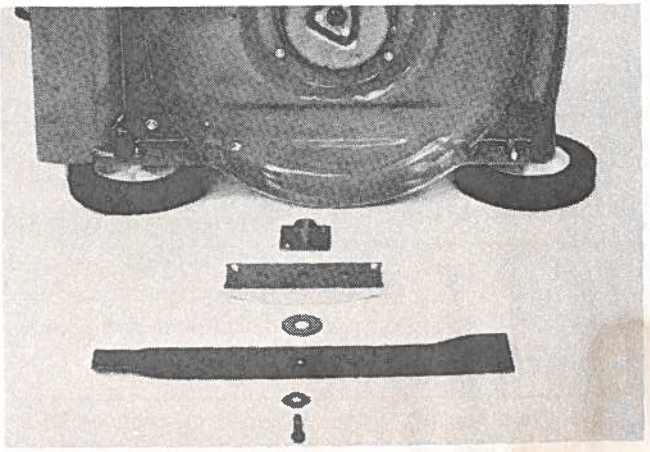
⚠ SAFETY WARNING:

The lockwasher and blade bolt must be replaced after being removed and reinstalled four (4) times. The locking feature of the lockwasher and blade bolt will have decreased and blade could loosen if replacement is not made.



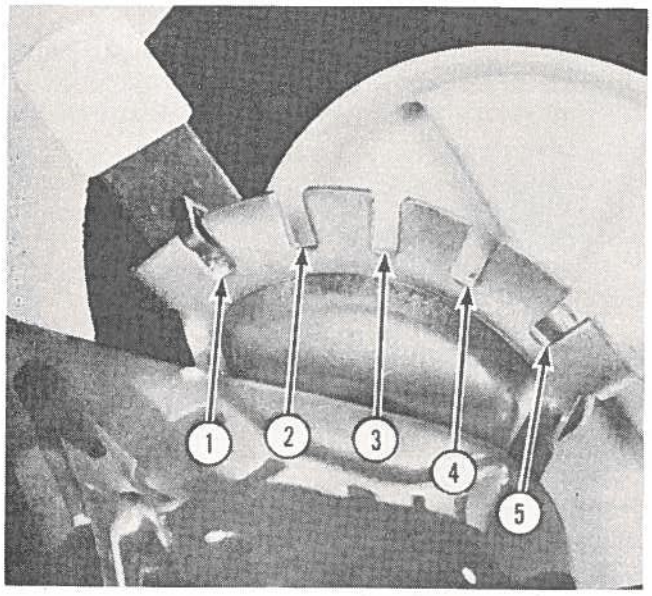
⚠ SAFETY WARNING:

Do not use any other type bolt or washer to retain the blade as there is a possibility of either of them breaking or failing during operation. A failure of either part may possibly result in an injury.

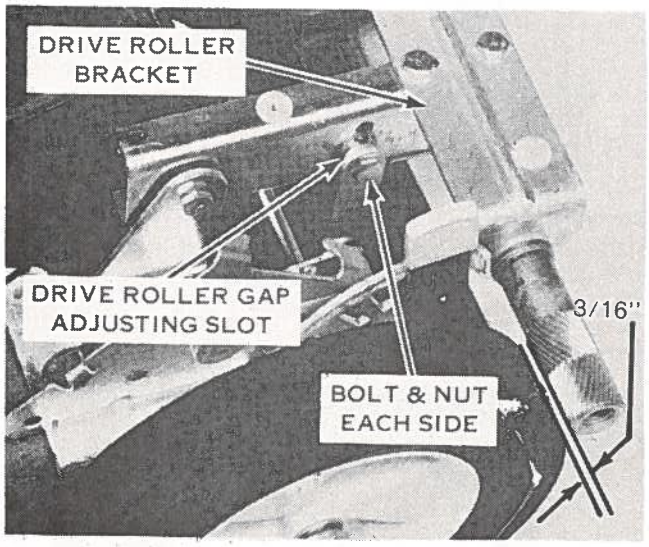


DRIVE ROLLER ADJUSTMENT

1. With the control handle in "Neutral", place both rear wheel height adjusters in #1 (lowest) cutting position as shown. A gap of 3/16" should appear between the drive rollers and tires.



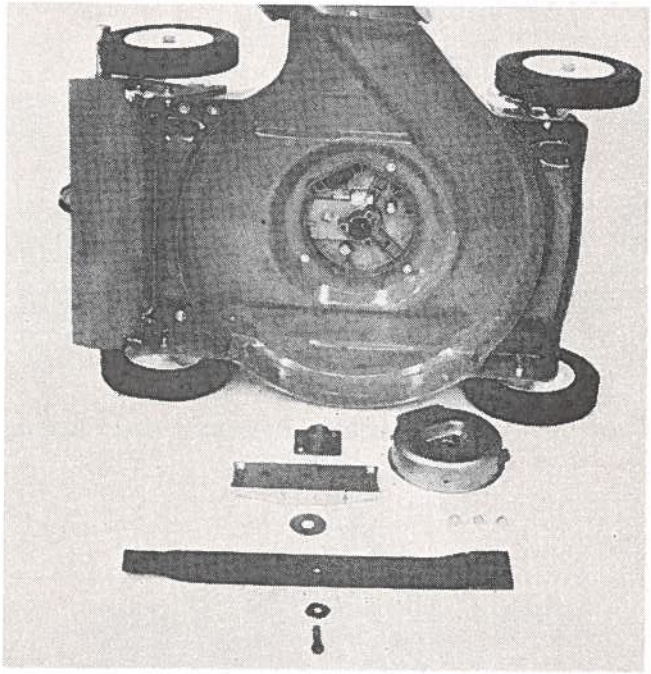
2. Remove four belt guard cover screws and remove cover.
3. Loosen bolt and nut located in drive roller gap adjusting slot on each side of driver roller bracket.
4. Move the drive roller bracket up or down to obtain the necessary 3/16" drive roller gap. Hold bracket in position and tighten both bolts and nuts securely.



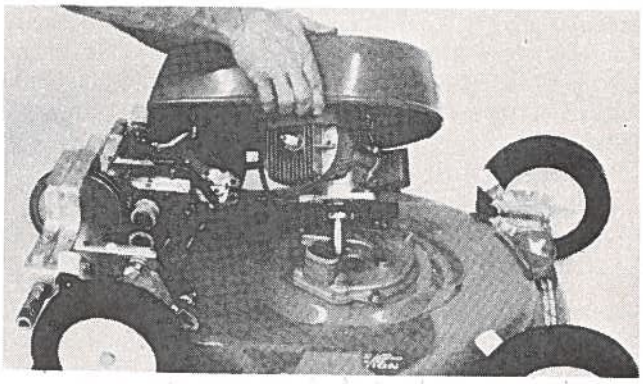
ENGINE REMOVAL OR REPLACEMENT

⚠ SAFETY WARNING:
To prevent starting of engine, disconnect and remove spark plug prior to removing the engine.

1. Remove blade bolt, washer, blade, blade stiffener, collar and three bolts securing muffler and remove muffler.
2. Remove three bolts securing engine to muffler plate and remove engine.



NOTE:
Do not remove muffler plate from housing when removing engine.

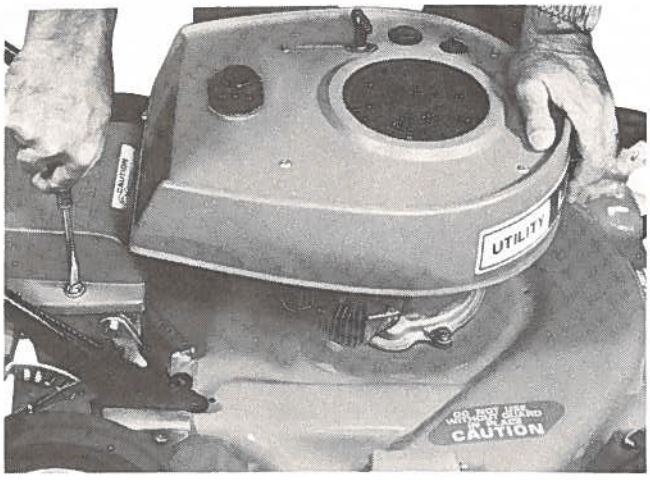


V BELT REMOVAL OR REPLACEMENT

⚠ SAFETY WARNING:
To prevent starting engine, disconnect and remove spark plug.

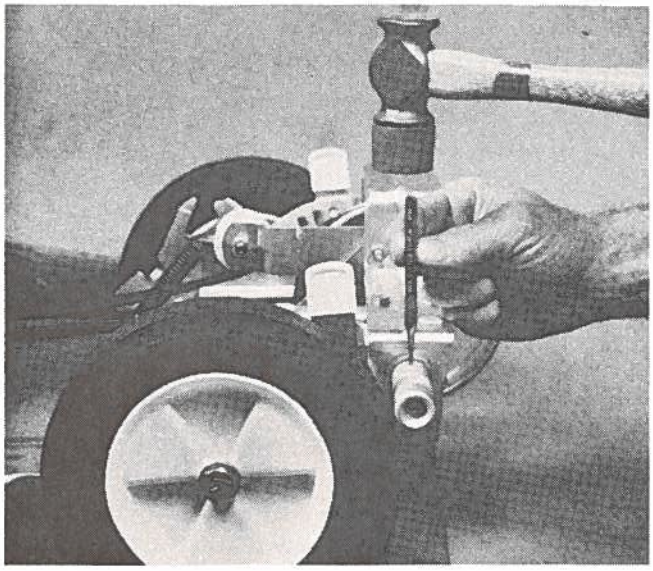
The "V" belt used on the utility self-propelled model mowers is a SPECIAL BELT (part no. 610040). DO NOT SUBSTITUTE. It won't work as WELL or as LONG.

To remove the belt:
1. Remove engine and remove drive belt from drive pulley.
2. Remove four belt guard cover screws and remove cover.

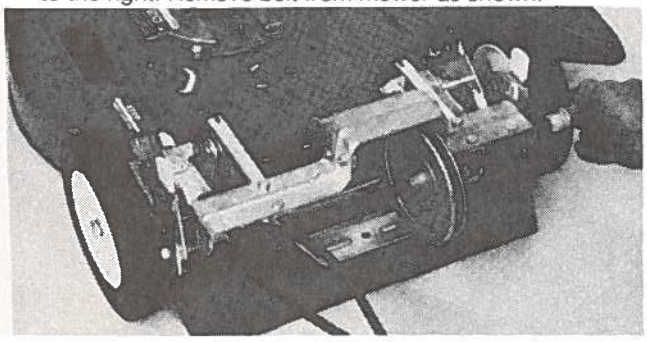


⚠ SAFETY WARNING:
Do not operate mower with belt guard removed.

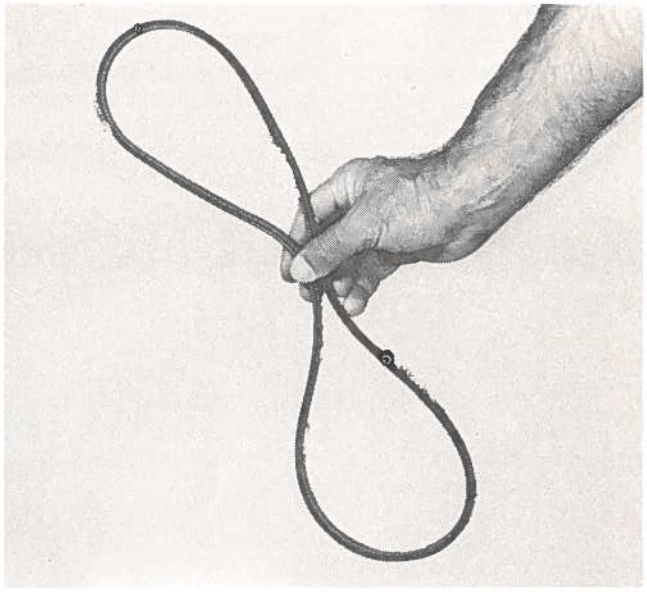
3. Remove roll pin from left hand drive roller and remove roller.



4. Remove belt from driven pulley and slide shaft assembly to the right. Remove belt from mower as shown.

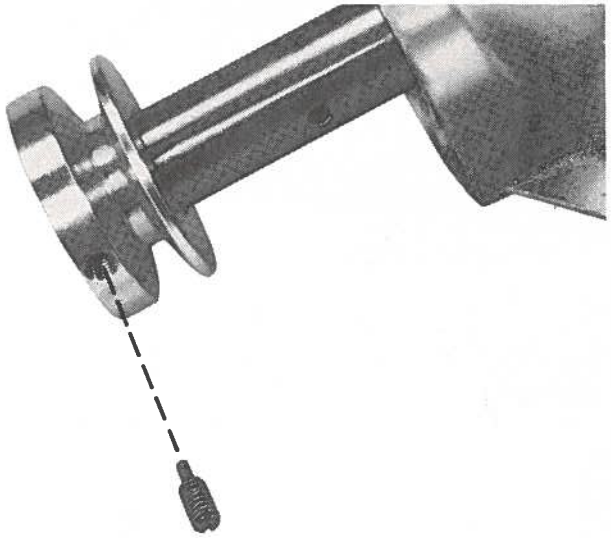


NOTE:
After the belt has been removed, examine for broken, cracked or misaligned pulleys. The condition and the wear pattern of the belt will provide clues for the above possibilities. Replace damaged or worn pulleys.



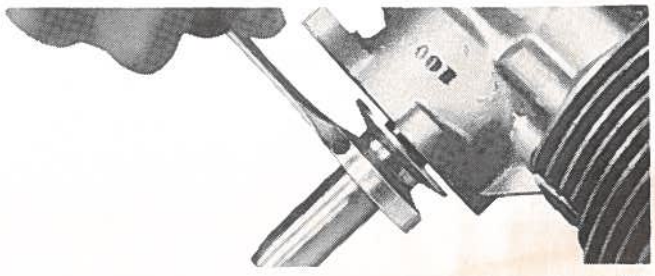
WORN BELT

5. The crankshaft pulley (drive pulley) is secured to the crankshaft with a SPECIAL slotted set screw. The end of this screw locates in a hole in the crankshaft. The correct position and tightness is very IMPORTANT. If not tightened securely, damage to the pulley, crankshaft and premature wear of the drive belt will result.

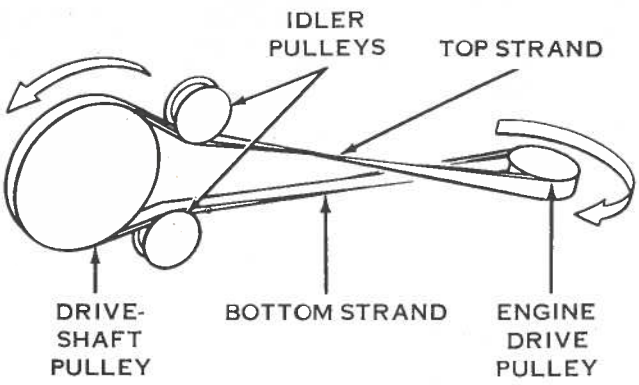


6. When reinstalling pulley to crankshaft, the side of the pulley with set screw is the lower side. If assembled upside down (set screw on top) misalignment and interference of pulley operation will result. Always check pulley for damage. Replace if necessary.

NOTE:
Apply OMC Screw Lock (part no. 384848) to threads of set screw prior to installation.



NOTE:

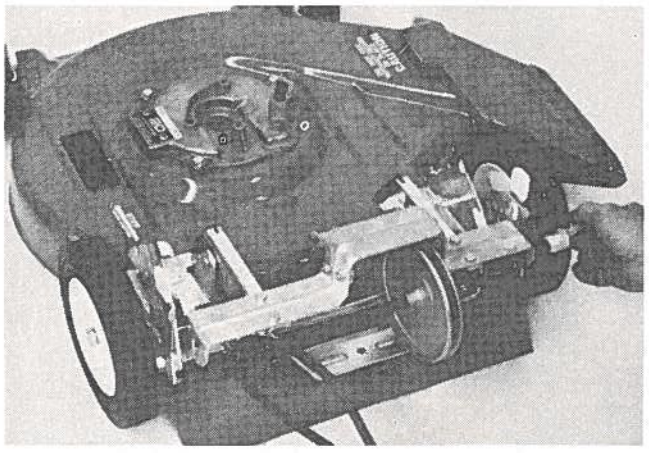


INSTALL BELT AS SHOWN
FOR PROPER PULLEY ROTATION

⚠ SAFETY WARNING:
Improper drive belt installation may allow mower to operate in reverse direction causing injury to the operator or bystanders. Assemble drive belt as shown.

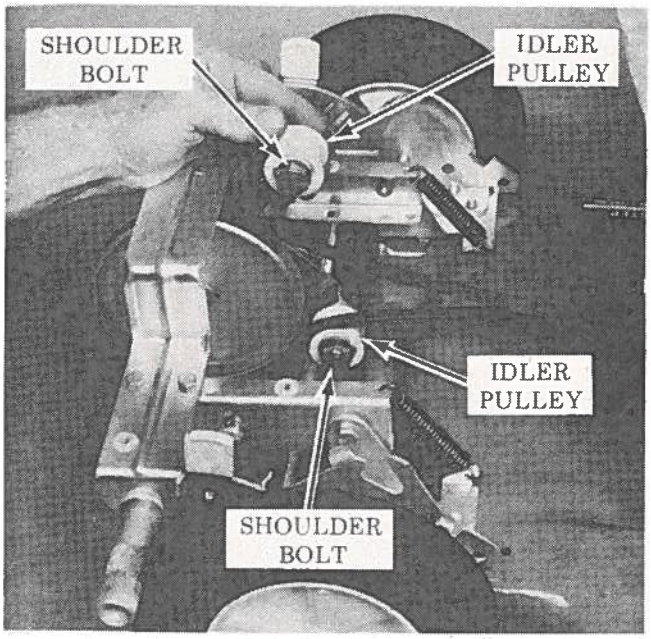
---

7. Place belt over left end of drive shaft as shown. Do not assemble on driveshaft pulley.



8. As you face the front of the mower, twist the forward end of the belt 1/4 turn counterclockwise and assemble on the engine drive pulley. Assemble engine on muffler plate and secure with three bolts.

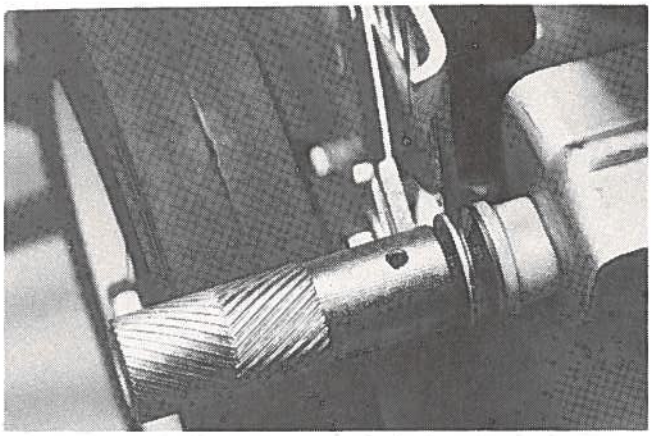
Release spring tension on idler pulleys and assemble belt on driveshaft pulley. Reassemble idler pulley spring and rotate the belt several revolutions. Check to make sure the belt is centered on the pulleys and TURNING IN THE RIGHT DIRECTION. *Note direction of arrow on large pulley in illustration above.* Check and adjust belt tension if necessary. Refer to BELT TENSION ADJUSTMENT.



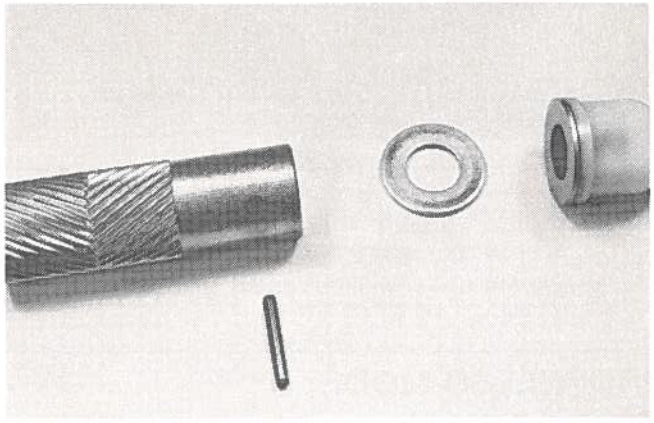
NOTE:
When replacing either the floating or fixed belt idler use the complete assembly. Part No. 682374.

BUSHING AND BEARING INSTALLATIONS

NOTE:
The sleeve has a flat surface that matches the flat surface of the bracket. When re-assembling, the flat surfaces must match.

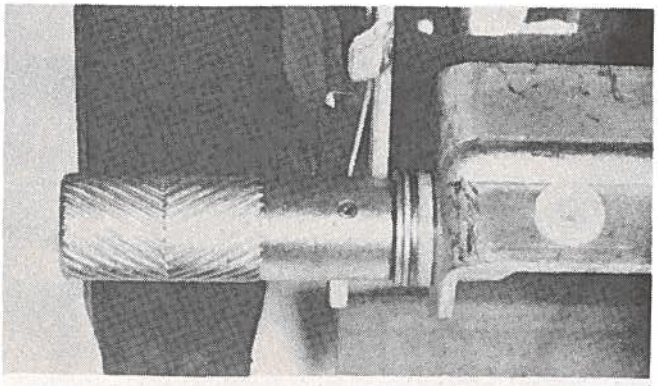


a. Check the condition of the driveshaft, bronze bearings, and sleeve. If signs of damage or wear appear, replace them.

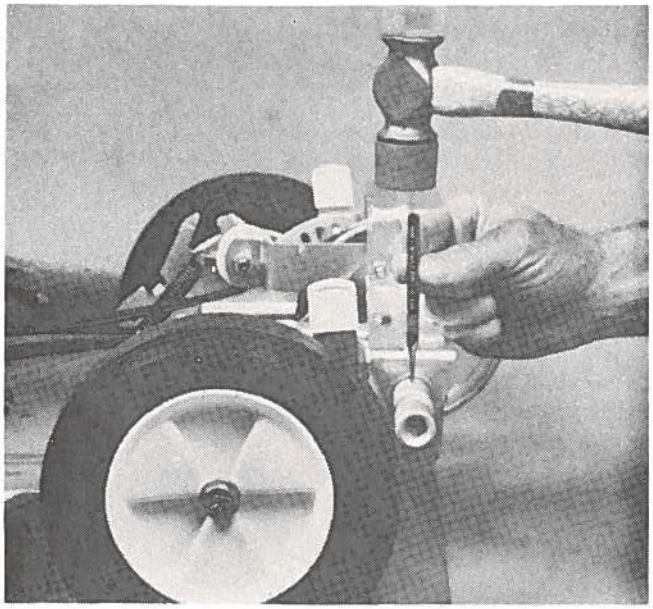


b. Reassemble the driveshaft into the bearing and slide it to the left as far as possible. Assemble the washer and drive roller on the drive shaft.

c. The drive rollers must be properly installed to utilize the self-cleaning feature. Proper installation is with the vee pointing away from the wheel as shown.



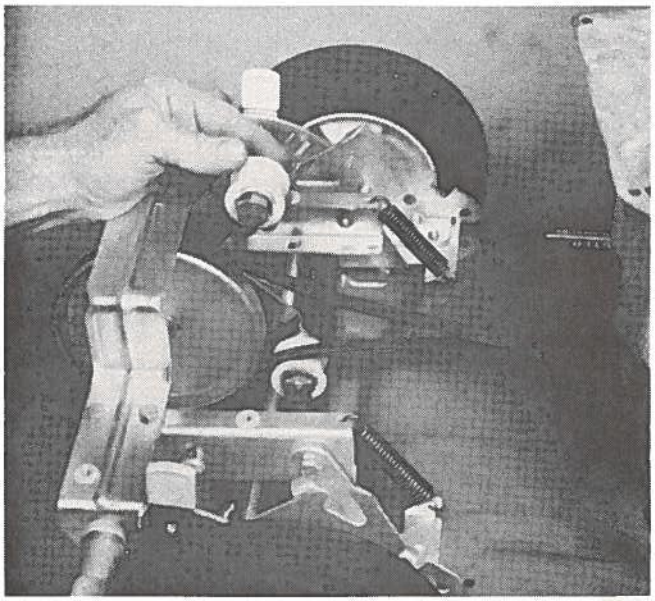
d. Using a new roll pin, assemble the drive roller to the drive shaft. Use a 5/32" or larger drift punch, drive the roll pin into place, flush with the outer surface. Neither end should protrude beyond the roller surface.



10. Reinstall belt cover guard.

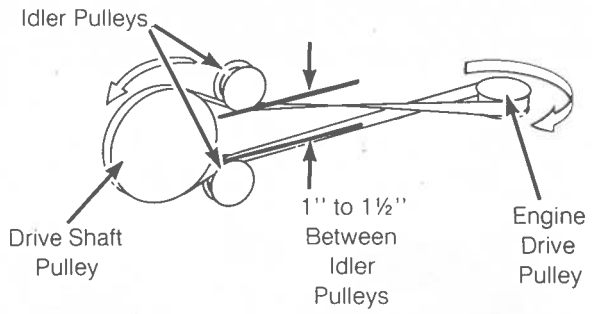
BELT TENSION ADJUSTMENT

1. Check drive belt installation. Drive belt must be installed between idler pulleys as shown.



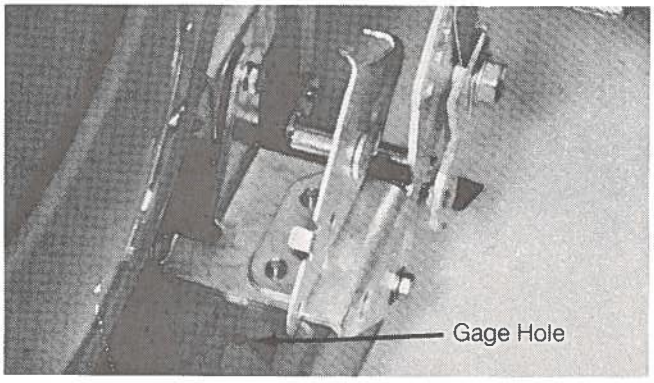
11 SEE NEXT PAGE

2. Drive belt should be checked to insure that proper tension exists in order to prevent premature belt failure. Lift floating idler from the upper strand of "V" belt. Belt will then become loose. Set floating idler onto "V" belt and check clearance between the two idler pulleys. They should have 1" minimum to 1-1/2" maximum distance between their nearest edges as shown.



3. To adjust belt tension; loosen four handle bracket mounting screws (two on each bracket) and two screws (one on each side) located on the sides of rear height adjuster bracket as shown. Slide entire self-propelling mechanism in direction necessary to obtain the proper "V" belt tension.

4. Care should be taken to insure that both sides of the self-propelling mechanism are positioned equally on the mower housing. This can be accomplished by measuring the distance from the front edge on the height adjuster brackets to the 1/4" diameter gage holes located directly in front of these brackets as shown. This distance must be the same for both sides. Before tightening screws make sure the distance between the idler pulleys nearest edges is 1" minimum to 1-1/2" maximum. Tighten the four handle bracket screws and the two side screws securely. Reassemble belt guard to self-propel mechanism using screws previously removed.

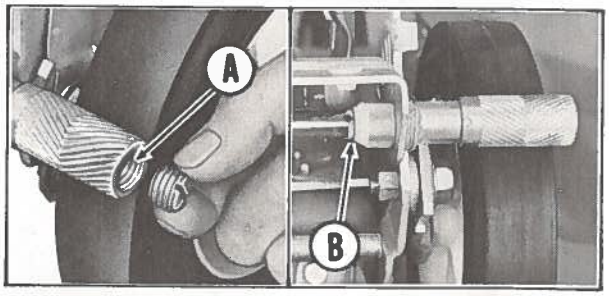


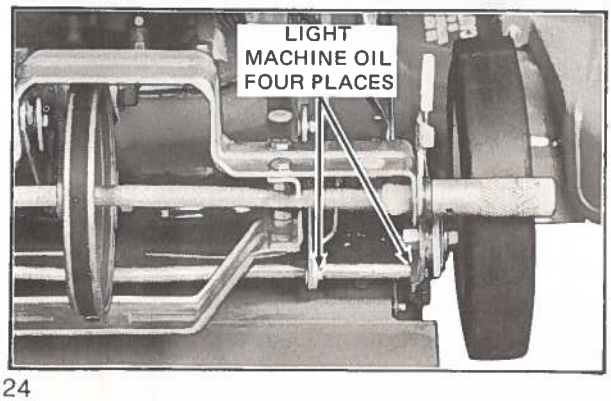
⚠ SAFETY WARNING:
Do not operate mower with belt guard removed.

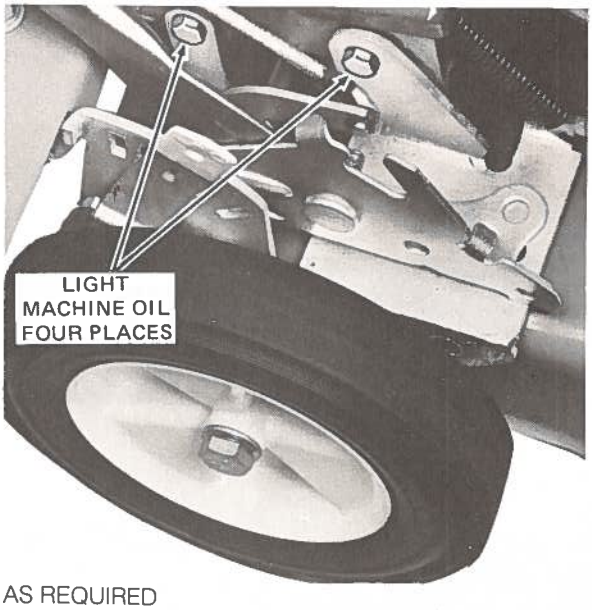
LUBRICATION - SELF-PROPELLED MODELS

10 HOURS

1. DRIVE ROLLER BEARINGS — Disassemble rotating shaft cover from self-propel mechanism by removing four screws. Unscrew plug from end of each drive roller. Fill exposed cavity with OMC ANTI-CORROSION LUBE (formerly TYPE A LUBRICANT) OR EQUIVALENT. Replace plug and tighten until snug. Point "A." Repeat procedure until lubricant appears on cross-shaft at Point "B." To prevent loss of the grease plug make sure plug is driven to the bottom of the cavity and securely tightened. Reassemble rotating shaft cover to self-propel assembly.

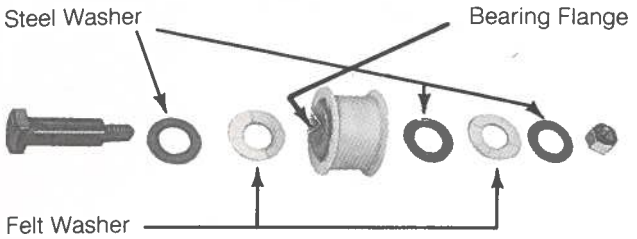






AS REQUIRED

2. CLUTCH LINKAGE — Apply several drops of light machine oil on clutch mechanism at all pivoting points.



IDLER PULLEY

3. Do not immerse the idler pulleys in solvent. Use a rag containing solvent, clean the hole in the idler pulleys and the shoulder bolt thoroughly. Using a small amount of OMC ANTI-CORROSION Lube or EQUIVALENT, relubricate the shoulder bolts and remount idler pulley assembly in the same order they were originally.

MAINTENANCE CHART

HOURS OF OPERATION	MAINTENANCE
Each use	After each mowing, clean grass clippings from underside of mower housing. ⚠ SAFETY WARNING: **To prevent starting of engine, disconnect spark plug wire before cleaning underside of housing or clogged grass chute, or performing maintenance.**
10 hours	Clean air cleaner (more frequently under dusty condition).
10 hours	Lubricate drive roller bearings. See instructions page 24.
40 hours	Or immediately after striking a solid object or obstruction. Check blade for sharpness, balance and straightness.
50 hours	Disassemble the idler pulleys, being careful to note order of parts for reassembly. Do not immerse the idler pulleys in solvent. Using a rag containing solvent, clean the hole in the idler pulleys and the shoulder bolt thoroughly. Using a small amount of OMC ANTI-CORROSION Lube or EQUIVALENT, relubricate the shoulder bolts and remount idler pulley assembly in the same order they were originally.
50 hours	Clean out carbon from exhaust ports and muffler tube. Check spark plug for dirt, oil, and/or carbon.

This chart represents periodic service. It does not preclude earlier action if a malfunction or suspected malfunction dictates.

Have a competent serviceman make a thorough inspection of your mower at least once a year.

STORAGE

PREPARATION FOR ENGINE STORAGE

⚠ SAFETY WARNING:
Do not store gasoline (fuel) unnecessarily over long periods of time. To prevent possible explosion, store only in approved "safe" containers. To prevent explosion of vaporized fuel, do not store mower with fuel in tank or carburetor or excess fuel in container in an enclosure with open flame. (Example: Furnace or water heater pilot light.)

1. Drain all fuel from fuel tank, fuel line and carburetor. If you store fuel, use Lawn-Boy 2+4 Fuel Conditioner in your fuel to stabilize the gasoline. Add one ounce of Lawn-Boy 2+4 Fuel Conditioner for each gallon of fuel. Store only in approved "safe" containers as noted above.
2. Always store mower with fuel shut-off valve in the "OFF" position.
3. Remove spark plug and pour approximately a tablespoon of clean oil through spark plug opening. OMC Rust Preventative can also be used.
4. Turn flywheel slowly to distribute oil on cylinder walls and replace spark plug.
5. Store in dry area.

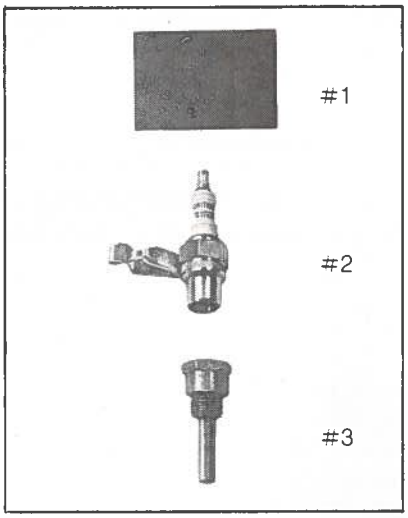
REMOVAL FROM STORAGE

1. Remove spark plug.
2. Spin crankshaft by pulling on starter handle to expel excessive oil from cylinder.
3. Clean spark plug and replace. Install new plug if cracked, broken, or badly burned.
4. Tighten all screws and nuts.
5. Open fuel shut-off valve and fill tank with new fuel mixture.

12
13
14 SEE NEXT PAGE
15 SEE NEXT PAGE

SPECIAL SERVICE TOOLS

Available from Lawn-Boy Dealers



#1 604659 — Air Gap Gauge .010
#2 426814 — Test Plug
#3 677389 — Piston Stop

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- Save time and money
- Understand all principles of LAWN-BOY operation
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Please Print or Type

Parts Catalog Section

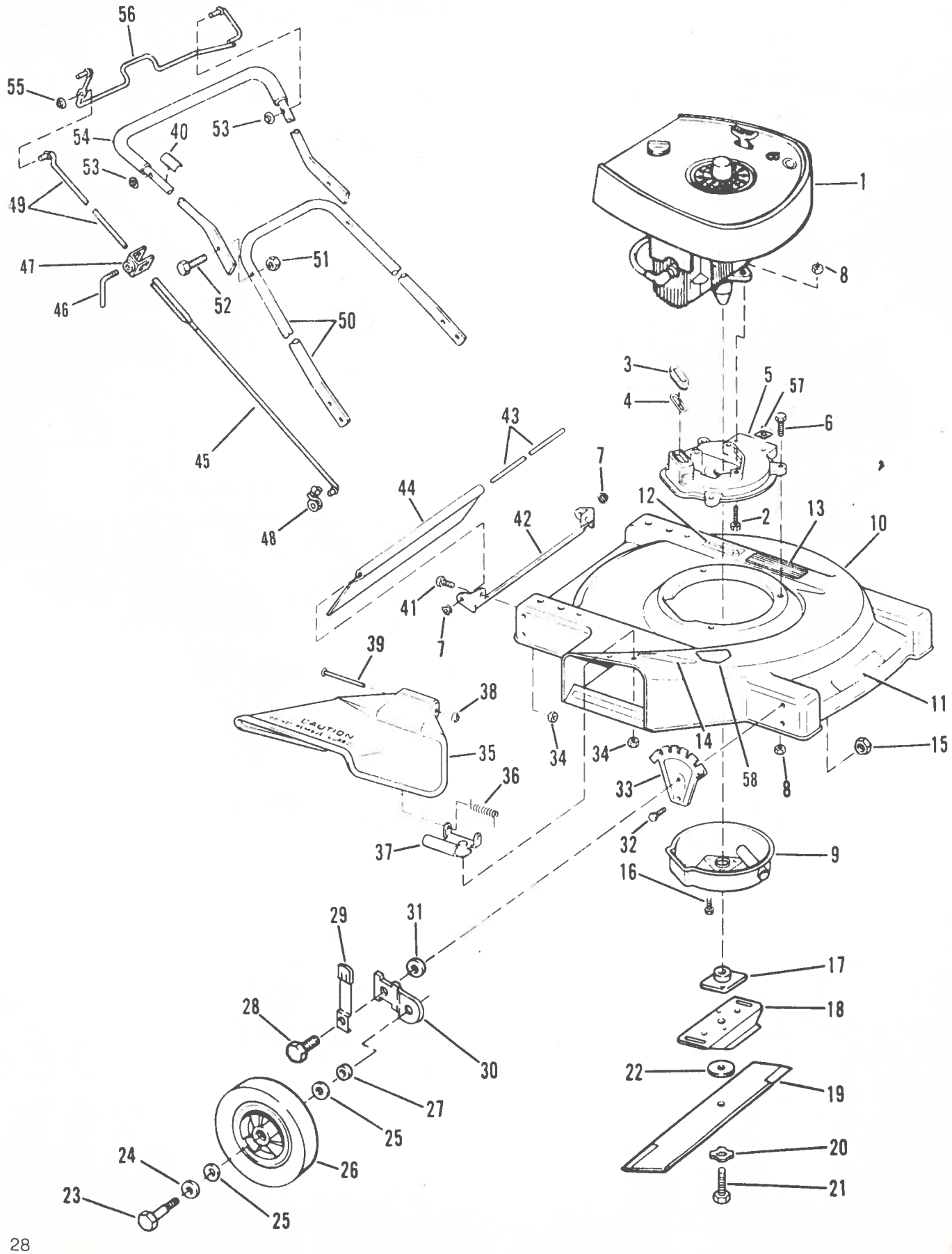
MODEL 8601

SELF-PROPELLED UTILITY MODEL
ENGINE: LAWN-BOY 2-CYCLE, MODEL D411
COLOR: TURF GREEN
WIDTH OF CUT: 20 INCHES
SERIAL NO. LOCATION: MUFFLER PLATE

MODEL 4501

PUSH-UTILITY MODEL
ENGINE: LAWN-BOY 2-CYCLE, MODEL D411
COLOR: TURF GREEN
WIDTH OF CUT: 20 INCHES
SERIAL NO. LOCATION: MUFFLER PLATE

DECK, SHROUD AND HANDLE GROUP
UTILITY MODEL 8601 SELF-PROPELLED



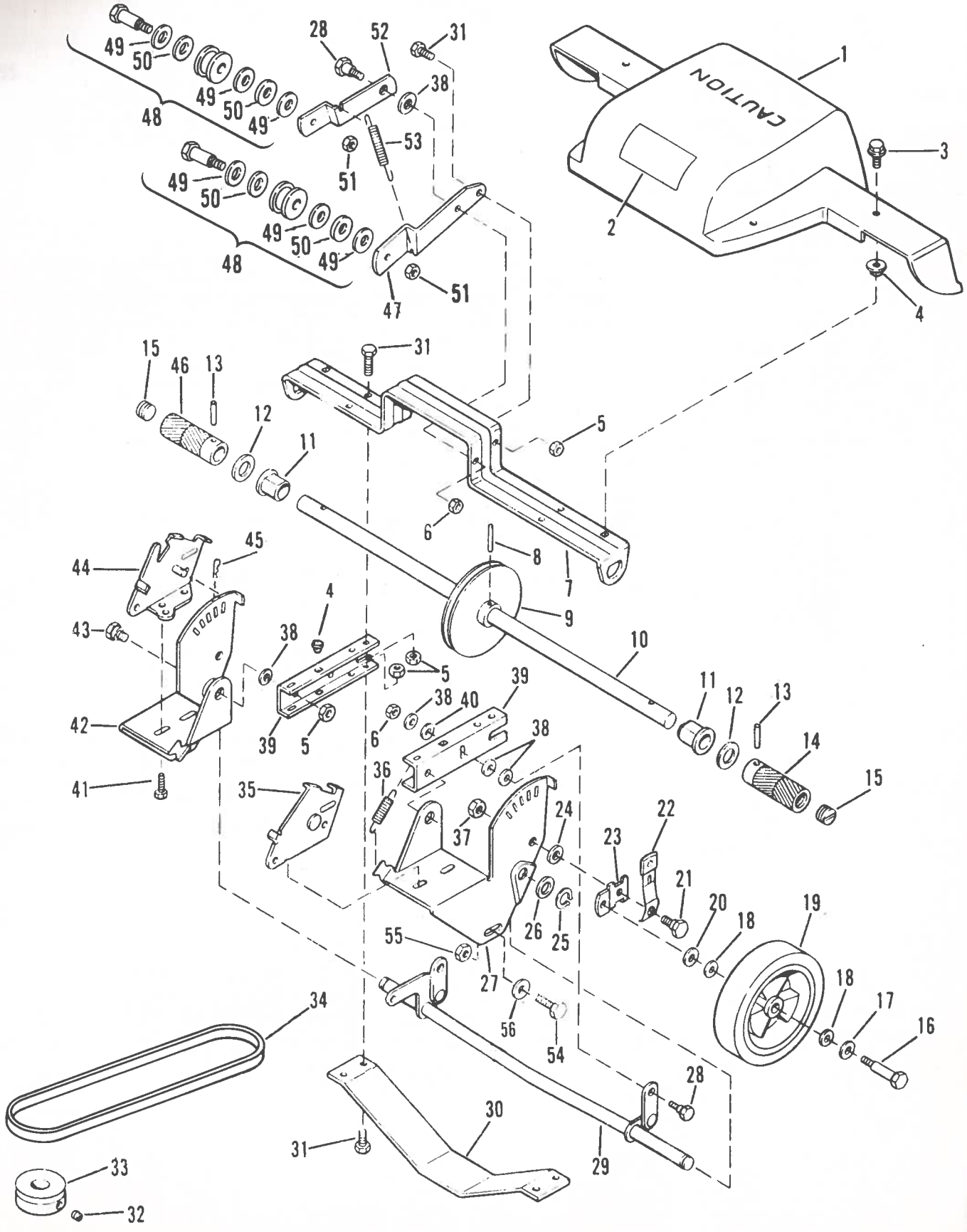
DECK, SHROUD AND HANDLE GROUP
UTILITY MODEL 8601 SELF-PROPELLED

Ref. No.	Part No.	Description	No. Req'd.
1	682241	Engine - D411	1
2	609994	Screw - Muffler Plate to Crankcase	3
3	602717	Sleeve - Muffler Gasket	1
4	604624	Gasket - Muffler	1
5	609955	Muffler Plate	1
6	604862	Screw - Muffler Plate to Hsg.	3
7	609975	Nut	2
8	608311	Locknut	6
9	681902	Muffler Cover Ay.	1
10	681967	Housing Assembly - 20''	1
11	609991	. Decal - Caution	1
12	609993	. Decal - Starting Pad	1
13	609961	. Pad - Starting	1
14	610054	. Decal - Caution Deflector	1
15	603773	Nut - Ht. Adj. & Back-up Plate	4
16	609471	Screw - Muffler Cover to Plate	3
17	681863	Collar & Plate Assembly	1
18	603541	Stiffener - Blade	1
19	610041	Blade - 20''	1
20	605339	Lockwasher - Blade	1
21	609960	Bolt - Blade	1
22	605058	Washer - Blade	1
23	603441	Bolt - Wheel	2
24	605256	Washer - Wheel Bolt Head	2
25	605255	Washer - Felt	4
26	678637	Wheel & Tire Ay. - Front	2
27	603620	Washer - Wheel Bolt	2
28	610646	Bolt - Shoulder	2
29	682231	Knob & Spring Ay.	2

Ref. No.	Part No.	Description	No. Req'd.
30	608833	Height Adj. Brkt. - Front	2
31	608834	Washer - Height Adjust	2
32	610039	Screw - Ht. Adj. Brkt. to Hsg.	2
33	609979	Plate - Ht. Adj. Back-up	2
34	602315	Nut - Chute Deflector & Trailing Shield	4
35	681880	Chute Deflector Ay.	1
36	610015	. Spring	1
37	681879	. Hinge & Screw Ay.	1
38	610017	. Nut	1
39	610016	. Pin - Hinge	1
40	610544	Decal	1
41	609891	Screw - Trailing Shield	2
42	610027	Bracket - Trailing Shield	1
43	610026	Rod - Trailing Shield	1
44	610025	Trailing Shield	1
45	682236	Control Rod Assembly	1
46	603699	. Lever	1
47	602992	. Nut	1
48	610090	. Clip	1
49	610543	Control Rod	1
50	610487	Handle Section - Bottom	1
51	602315	Nut Handle	2
52	610096	Screw - Handle	2
53	605546	Nut	2
54	682234	Handle & Grip Ay.	1
55	609975	Nut	1
56	610542	Lever - Control	1
57	610342	Nut - Model Plate	2
58	610640	Decal - Blade Contact Warning	1

Note: Painted, plastic, fiberglass replacement parts or wheels may not always be available in matching colors.

DRIVE GROUP
UTILITY MODEL 8601 SELF-PROPELLED



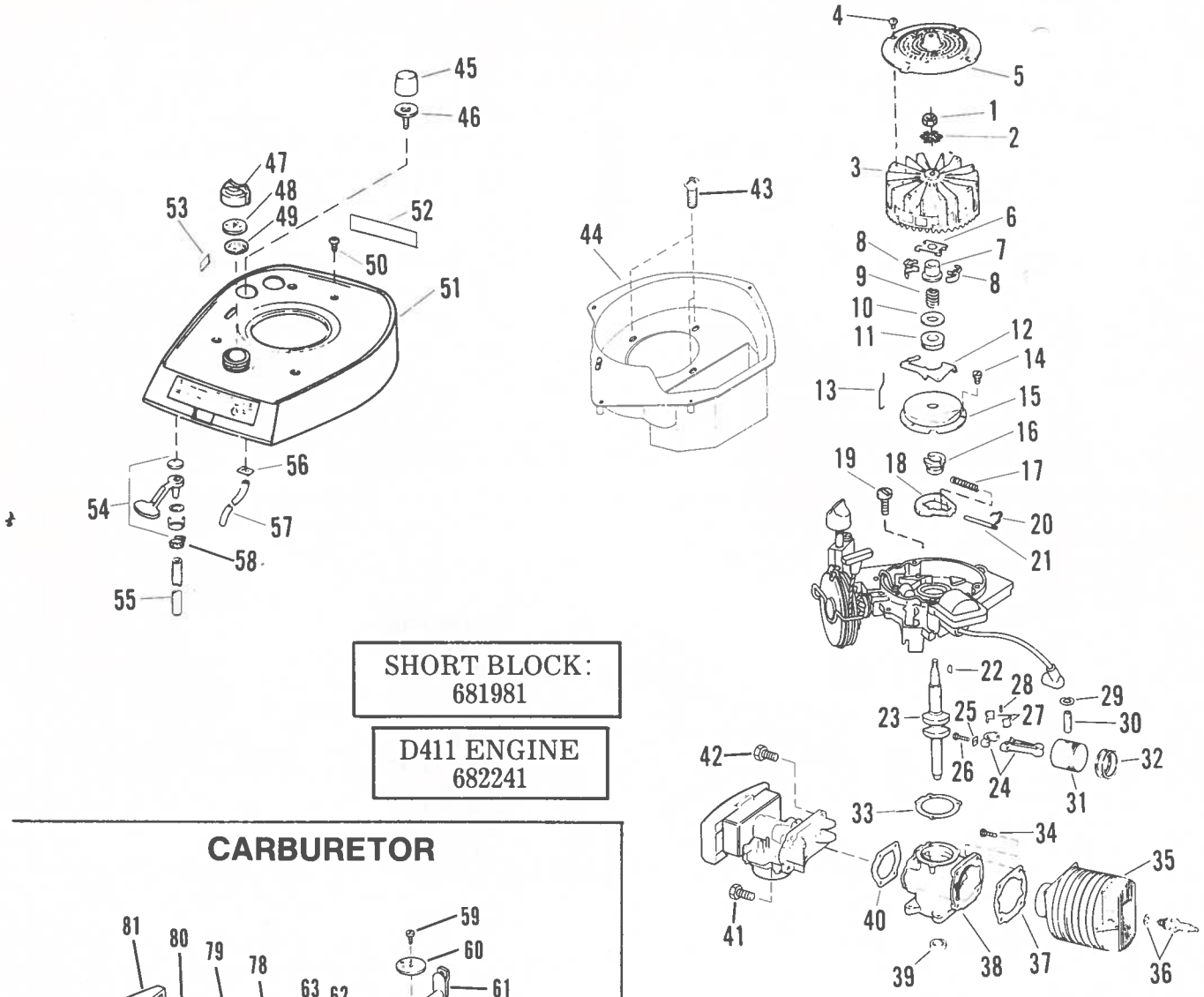
DRIVE GROUP
UTILITY MODEL 8601 SELF-PROPELLED

Ref. No.	Part No.	Description	No. Req'd.
1	681891	Cover & Decal Ay.	1
2	609998	. Decal - Belt Inst.	1
3	610066	Screw - Drive Cover	4
4	604604	Grommet	4
5	602315	Nut	9
6	602201	Nut	3
7	609996	Bracket - Bearing	1
8	311866	Roll Pin	1
9	610035	Pulley	1
10	610012	Shaft	1
11	681904	Sleeve & Bearing Ay.	2
12	603037	Washer (2-4)	A/R
13	606013	Pin - Spring	2
14	610051	Drive Roller - Left	1
15	602926	Plug	2
16	603441	Bolt - Wheel	2
17	605256	Washer - Wheel Bolt Head	2
18	605255	Washer - Felt	4
19	678638	Wheel & Tire Ay. - Rear	2
20	603620	Washer - Wheel Bolt	2
21	610646	Bolt - Shoulder	2
22	682231	Knob & Spring Ay.	2
23	610037	Bracket - Height Adj. Rear	2
24	608834	Washer - Rear Ht. Adj.	2
25	607676	Retaining Ring	2
26	610034	Washer	2
27	610031	Support Bracket - Left	1
28	602984	Bolt - Shoulder	3
29	681894	Clutch Shaft Assembly	1

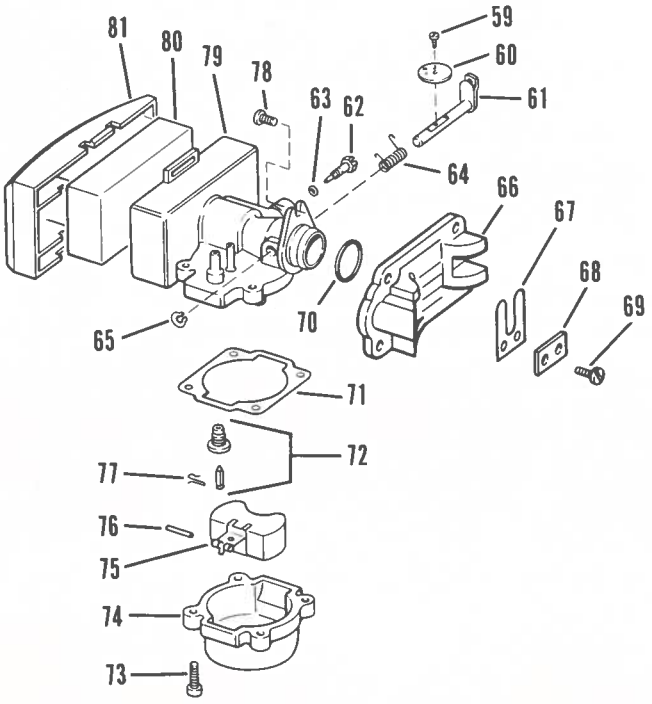
Ref. No.	Part No.	Description	No. Req'd.
30	610084	Pulley Guard	1
31	609891	Screw	7
32	610345	Setscrew	1
33	609976	Pulley - Engine	1
34	610040	V-Belt	1
35	682192	Handle Bracket & Pin Ay. L.H.	1
36	610007	Spring - Neutral Return	2
37	603773	Nut - Shoulder Bolt, Height Adj.	2
38	603093	Washer	9
39	609997	Arm - Pivot	2
40	603123	Washer	2
41	607188	Screw - Hdl. Brket. to Housing	4
42	610030	Support Bracket - Right	1
43	607665	Bolt - Shoulder	2
44	682193	Handle Bracket & Pin Ay. R.H.	1
45	605803	Hairpin	2
46	610050	Drive Roller - Right	1
47	610002	Idler Arm - Fixed	1
48	682374	Idler Service Ass'y	2
49	608030	. Washer - Thrust	6
50	610719	. Washer - Felt	4
51	608311	. Nut	2
52	610006	Idler Arm - Floating	1
53	610029	Spring - Floating Idler	1
54	610404	Screw	2
55	608311	Nut	2
56	610405	Washer	2

Note: Painted, plastic, fiberglass replacement parts or wheels may not always be available in matching colors.

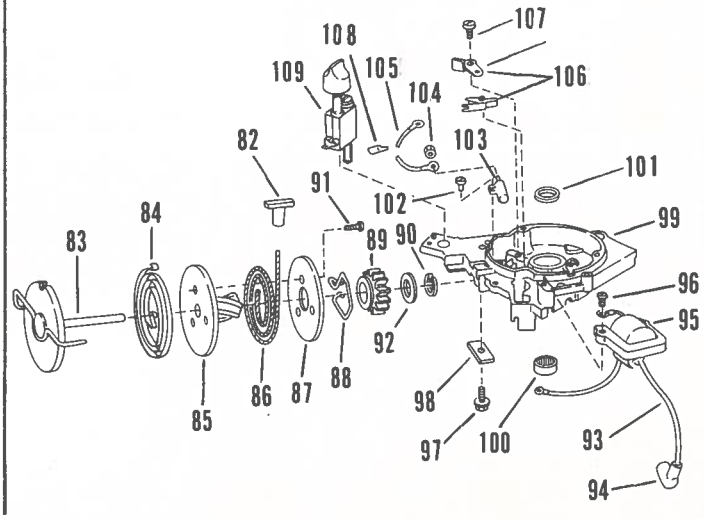
ENGINE GROUP - D411
UTILITY MODELS: 4501, 8601



CARBURETOR



MAGNETO AND STARTER



Ref. No.	Part No.	Description	No. Req'd.
1	130743	Nut - Flywheel	1
2	316959	Lockwasher - Flywheel	1
3	681547	Flywheel & Screen Ay.	1
4	606537	. Screw - Thd. Cutting	4
5	610547	. Screen & Cup	1
+	678149	Governor Assembly	1
6	602635	. Yoke - Governor	1
7	602634	. Collar - Governor	1
8	602636	. Weight - Governor	2
9	602633	. Spring	1
10	604413	. Thrust Washer	1
11	604265	. Collar - Thrust	1
12	604266	. Lever - Governor	1
13	604297	Rod - Governor	1
14	604344	Screw - Attach. Dust Cover	3
15	604264	Dust Cover	1
16	604276	Cam - Spark Advance	1
17	604267	Spring - Spark Advance	1
18	604263	Flyweight - Spark Advance	1
☆19	609760	Scr. Arm Pl. to Crankcase	3
20	604314	Retainer - Spring	1
21	604277	Pin - Spark Advance	1
22	607199	Key - Crankshaft	1
23	609956	Crankshaft	1
+	679155	Piston & Connect. Rod Ay.	1
24	679156	. Connect. Rod Ay.	1
25	307558	. . Lockpl. Connect. Rod Scr.	2
26	603976	. . Screw - Connect. Rod	2
27	677982	. . Liners - Connect Rod (Set)	1
28	677963	. . Needle Brg. Set	1
29	303712	. Retaining Ring	2
30	606608	. Wrist Pin	1
31	606607	. Piston	1
32	679252	. Ring Set	1
*33	602590	Gasket-Crkc. to Arm. Pl. .005 in.	A/R
*33	602763	Gasket - Crkc. to Arm. Pl. .010 in.	A/R
34	602657	Screw - Cyl. to Crankcase	4
35	678106	Cylinder and Sleeve Ay.	1
36	**	Spark Plug & Gasket	1
*37	604116	Gasket - Cyl. to Crankcase	1
38	679687	Crankcase and Seal Ay.	1
39	605020	. Oil Seal	1
*40	608362	Gasket - Reed Plate	1
41	604857	Screw - Reed Pl. to Crkc.	3
42	602192	Screw	1
43	608808	Screw - Air Baffle	4
44	681226	Air Baffle	1
45	610482	Bulb - Primer	1
46	607311	Base - Primer	1
47	682227	Cap - Gas Tank	1
48	609150	. Baffle	1
49	607213	. Gasket	1
50	608997	Screw - Cover Mtg.	4
51	682229	Shroud - Engine	1
52	610537	. Decal - Lawn-Boy	1
53	609205	. Decal - Fingertip	1
54	681524	Shut-off Valve	1
55	607581	Fuel Hose	1
56	608027	Fastener	1
57	607575	Tube - Primer	1
58	317284	Clamp Hose	1

Ref. No.	Part No.	Description	No. Req'd.
		CARBURETOR	
+	681843	Modular Carburetor	1
59	605522	. Screw - Disc	1
60	604295	. Disc - Throttle	1
61	678119	. Throttle Shaft	1
62	608874	. Screw - Alt. Adj.	1
63	304598	. O-Ring	1
64	604296	. Spring - Throttle	1
65	604286	. Grip Ring	1
66	681206	. Reed Plate Assembly	1
67	602588	. . Reed	1
68	602587	. . Plate - Back-up	1
☆69	303761	. . Screw - Machine	2
70	608793	. . O-Ring	1
71	609943	. Gasket - Bowl	1
72	681741	. Float Valve Ay.	1
73	608850	. Screw - Bowl	4
74	609946	. Bowl	1
75	681844	Float & Arm Ay.	1
76	300096	Pin - Hinge	1
77	603145	Clip	1
☆78	609374	Screw - Mtg.	1
79	681846	Carb. Body Ay.	1
80	607580	Element	1
81	608791	Cover - Filter	1
		MAGNETO & STARTER	
82	610546	Handle - Starter	1
+	682028	Starter Assembly	1
83	682083	. Spring - Cup - Pin Ay.	1
84	604257	. Spring - Starter	1
85	610032	. Pulley - Starter	1
86	607874	. Rope - Starter	1
87	610028	. Plate - Starter Pulley	1
88	604260	. Spring - Starter Pinion	1
89	607547	. Pinion - Starter	1
90	609004	. Retainer - Push-on	1
91	609003	. Scr. Threaded Cutting Starter	3
92	609005	. Washer	1
93	678117	High Tension Lead Ay.	1
94	580339	. Cover and Terminal Ay.	1
95	678539	Coil & Lamination Ay.	1
96	607526	Scr. - Lamination Mtg.	2
97	604857	Scr. - Starter Attach	1
98	604261	Clamp - Starter Pin	1
99	681316	Arm. Pl., Brg. & Oil Seal Ay.	1
100	679277	. Bearing	1
101	605020	. Oil Seal	1
102	510193	. Screw	1
103	677299	Cond. & Nut Ay.	1
104	133079	. Nut	1
105	681211	Terminal & Lead Ay.	1
106	677254	Brkr. Base & Arm Ay.	1
107	303212	Screw - Breaker Base	1
108	607145	Clip	1
109	682239	Shorting Switch	1

* 678071 - Gasket Set
\+ Not Shown
** Not sold individually: Sold only in prepack quantities of 20. Part # 679743.
☆ "OMC Screw Lock" used during assembly. Part #384848.

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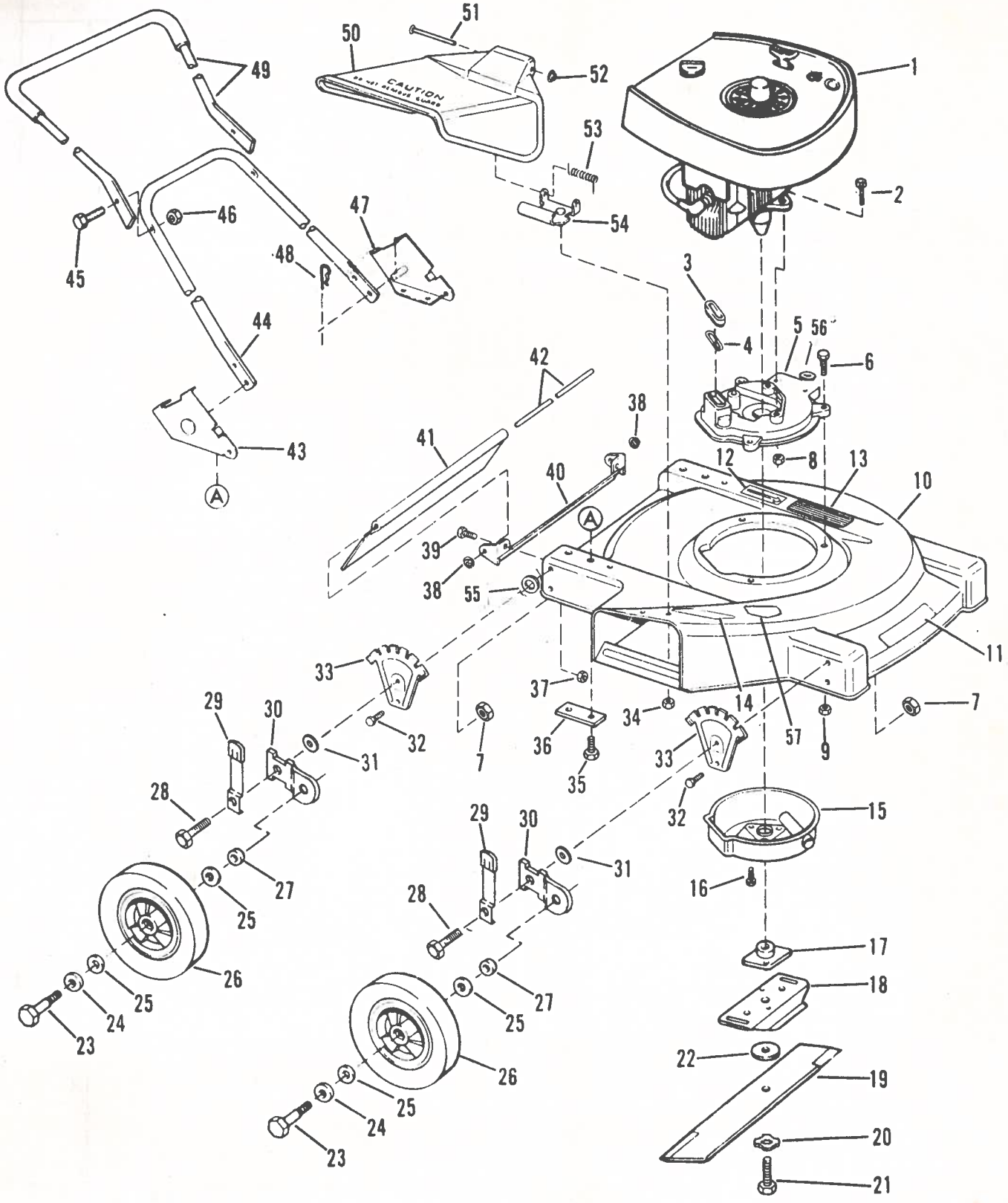
DECK, SHROUD AND HANDLE GROUP
UTILITY PUSH MODEL 4501



DECK, SHROUD AND HANDLE GROUP
UTILITY PUSH MODEL 4501

Ref. No.	Part No.	Description	No. Req'd.
1	682241	Engine - D411	1
2	609994	Screw	3
3	602717	Sleeve - Muffler Gasket	1
+4	604624	Gasket - Muffler	1
5	609955	Muffler Plate	1
6	604862	Screw - Muffler Plate to Housing	3
7	603773	Nut - Ht. Adj. & Back-up Plate	8
8	608311	Locknut	3
9	608311	Locknut	3
10	681967	Housing Assembly - 20"	1
11	609991	. Decal	1
12	609993	. Decal	1
13	609961	. Pad - Starting	1
14	610054	. Decal - Caution Deflector	1
15	681902	Muffler - Cover	1
16	609471	Bolt - Muffler Cover to Plate	3
17	681863	Collar & Plate Assembly	1
18	603541	Stiffener - Blade	1
19	610041	Blade - 20"	1
20	605339	Lockwasher - Blade	1
21	609960	Bolt - Blade	1
22	605058	Washer - Blade	1
23	603441	Bolt - Shoulder, Wheel	4
24	605256	Washer - Wheel Bolt Head	4
25	605255	Washer - Felt	8
26	678637	Wheel & Tire Assembly - 8"	4
27	603620	Washer	4
28	610646	Bolt - Wheel Brkt. to Knob & Spring Ay.	4

Ref. No.	Part No.	Description	No. Req'd.
29	682231	Knob & Spring Ay.	4
30	608833	Wheel Ht. Adj. Bracket	4
31	608834	Washer - Whl. Mtg. Brkt.	4
32	610039	Screw - Ht. Adj. Plate	4
33	609979	Plate - Height Adjust.	4
34	602315	Nut - Chute Deflector	2
35	607188	Screw - Handle Bracket	4
36	609962	Plate - Handle Bracket to Housing	2
37	602315	Nut - Trailing Shield Mtg.	2
38	609975	Nut	2
39	609891	Screw	2
40	610027	Bracket - Trailing Shield	1
41	610025	Shield	1
42	610026	Rod	1
43	682193	Bracket - Handle, Right	1
44	610487	Handle - Bottom	1
45	610096	Screw - Handle	2
46	602315	Nut - Handle	2
47	682192	Bracket - Handle, Left	1
48	605803	Hairpin	2
49	682195	Handle and Grip Assembly - Top	1
50	681880	Chute Deflector Ay.	1
51	610016	. Pin - Hinge	1
52	610017	. Nut	1
53	610015	. Spring	1
54	681879	. Hinge & Screw Ay.	1
55	609923	Washer - Housing	4
56	610342	Nut - Model Plate	2
57	610640	Decal - Blade Contact Warning	1

+ Gasket Set 678071

* Note: Painted, plastic, fiberglass replacement parts or wheels may not always be available in matching colors.

17 SEE NEXT PAGE
18 SEE NEXT PAGE

limited one-year warranty

Lawn-Boy, a product group of Outboard Marine Corporation, warrants for one (1) year each new Lawn-Boy walk-behind mower according to the following terms.

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase. Accordingly, this warranty is not transferable to any subsequent purchasers.

Any part of the Lawn-Boy walk-behind mower manufactured or supplied by Lawn-Boy and found in the reasonable judgment of Lawn-Boy to be defective in material or workmanship will be repaired or replaced by an authorized Lawn-Boy service dealer without charge for parts and labor.

The Lawn-Boy walk-behind mower including any defective part must be returned to an authorized Lawn-Boy service dealer within the warranty period. The expense of returning the Lawn-Boy walk-behind mower to the authorized Lawn-Boy service dealer for warranty service and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Lawn-Boy's responsibility in respect to warranty claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Lawn-Boy walk-behind mower.

Proof of purchase will be required by the authorized Lawn-Boy service dealer to substantiate any warranty claim. All warranty work must be performed by an authorized Lawn-Boy service dealer.

If this Lawn-Boy walk-behind mower is used commercially for such purposes as rental or other income-producing activities, then this warranty is limited to forty-five (45) days from the date of original retail purchase.

This warranty does not cover any Lawn-Boy walk-behind mower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Lawn-Boy Operator's Manual. The warranty does not apply to any damage to the Lawn-Boy walk-behind mower that is the result of improper maintenance or to any Lawn-Boy walk-behind mower or parts that have not been assembled or installed as specified in the Lawn-Boy Operator's Manual. The warranty does not cover any Lawn-Boy walk-behind mower that has been altered or modified so as to adversely affect the product's operation, performance or durability, or that has been altered or modified so as to change its intended use. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which are either incompatible with the Lawn-Boy walk-behind mower or adversely affect its operation, performance or durability.

Lawn-Boy reserves the right to change or improve the design of any Lawn-Boy walk-behind mower without assuming any obligation to modify any Lawn-Boy walk-behind mower previously manufactured.

ALL **IMPLIED WARRANTIES** ARE **LIMITED IN DURATION** TO THE APPROPRIATE **ONE (1) YEAR OR FORTY-FIVE (45) DAY** WARRANTY PERIOD.

ALL IMPLIED WARRANTIES, INCLUDING **MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE** OR OTHERWISE **ARE DISCLAIMED** IN THEIR ENTIRETY AFTER EXPIRATION OF THE APPROPRIATE ONE (1) YEAR OR FORTY-FIVE (45) DAY WARRANTY PERIOD.

LAWN-BOY'S OBLIGATION UNDER THIS WARRANTY IS STRICTLY AND EXCLUSIVELY **LIMITED TO** THE **REPAIR OR REPLACEMENT** OF DEFECTIVE PARTS AND LAWN-BOY DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

LAWN-BOY ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, EXPENSE FOR GASOLINE, EXPENSE OF RETURNING THE LAWN-BOY WALK-BEHIND MOWER TO AN AUTHORIZED DEALER AND EXPENSE OF RETURNING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE OR TELEGRAPH CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF USE OF THE LAWN-BOY WALK-BEHIND MOWER, LOSS OF TIME, OR INCONVENIENCE.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty applies to Lawn-Boy walk-behind mowers sold in the United States. Any Lawn-Boy walk-behind mowers sold elsewhere are warranted by the affiliated marketing company of Outboard Marine Corporation.

LAWN-BOY
Monmouth Boulevard
Galesburg, Illinois 61401

A Product Group of
OUTBOARD MARINE CORPORATION
Waukegan, Illinois 60085

warranty service

To make a claim under warranty, contact the dealer immediately upon realizing a problem exists. We recommend having the warranty service performed by the dealer who originally sold you the mower; however, warranty work can be obtained from any authorized Lawn-Boy service dealer. Remember, your Lawn-Boy mower must be delivered to a dealer within the warrany period, and all warranty work should be performed by an authorized Lawn-Boy service dealer. Proof of purchase may be required by the dealer to substantiate any warranty claim.

EXAMPLES OF ITEMS NOT COVERED BY WARRANTY

Provisions of the Warranty Will Not Apply to:

Normal service requirements arising during the warranty period, such as carburetor or ignition adjustment and cleaning, normal wear, or blade sharpening and balancing.

Normal service work over and above the repair and replacement of defective parts.

Mowers subject to misuse, neglect, negligence, or accident.

Mowers that have been altered or modified so as to adversely affect their operation, performance or durability, or to change their intended use.

Repairs made necessary by the use of parts or accessories which are either incompatible with the mower or adversely affect is operation, performance, or durability.

Mowers not operated or maintained in accordance with the instructions in the Lawn-Boy Operator's Manual.

Normal cleaning, adjusting or replacing of such items as filters, spark plugs, or ignition points.

Expense of returning the mower to the dealer for warranty service and expense of delivering it back to the owner, mechanic's travel time, or rental of a like product during the time warranty service is being performed.

The warranty applies only to the original retail purchaser. Second-owner or subsequently owned mowers are not covered under warranty.

OWNER'S OBLIGATION AND RESPONSIBILITY

Normal maintenance service and replacement of service items are the responsibility of the owner and as such are not considered defects in material or workmanship within the terms of the warranty. Individual operating habits and usage contribute to the need for maintenance service.

See your Lawn-Boy dealer for proper maintenance and care of your mower. Proper maintenance and care will assist in keeping your overall operating cost at a minimum.

To validate a warranty claim, it is the owner's responsibility to maintain all components in proper adjustment and to service the mower as specified in the Lawn-Boy Operator's Manual. It is the owner's responsibility to provide proper lubrication for all components and provide correct recommended fuel mixture for the mower.

ONE STOP SERVICE

Warranty and complete service on rotary mowers, including engine, through more than 8,000 factory-authorized service dealers. Refer to your Yellow Pages.

PART NO. 610535

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